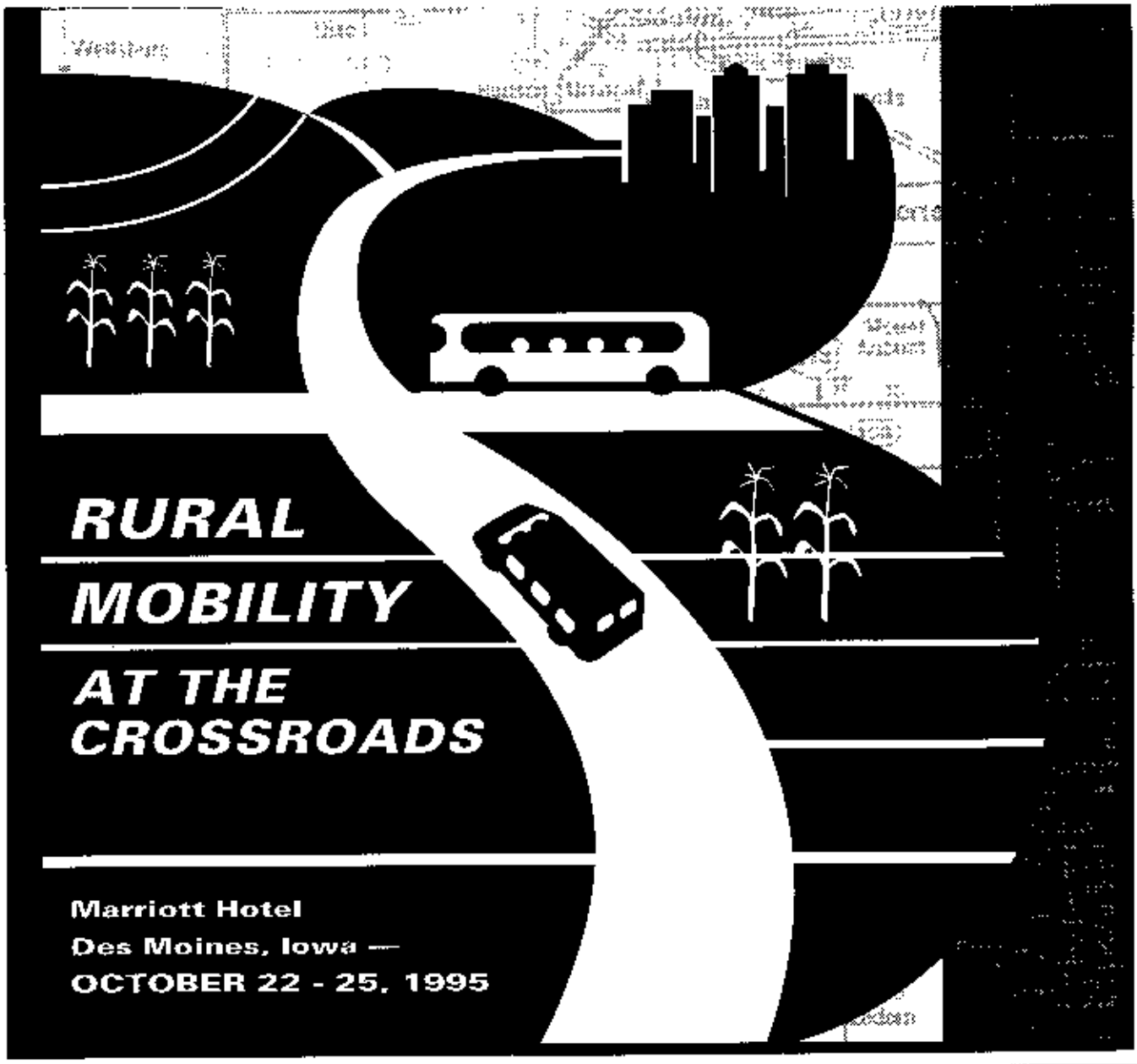
U.S. Department of Transportation

Connections: Rural Mobility at the Crossroads

Proceedings of the 12th National Conference on Rural Public Transportation

October 1995



Federal Transit Administration

Connections: Rural Mobility at the Crossroads

Proceedings of the 12th National Conference on Rural Public Transportation

Final Report
October 1995

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12th National Conference

Rural Public and Intercity Bus Transportation

Connections: *RURAL MOBILITY AT THE CROSSROADS*

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12th National Conference

Rural Public and Intercity Bus Transportation

Connections: *RURAL MOBILITY AT THE CROSSROADS*

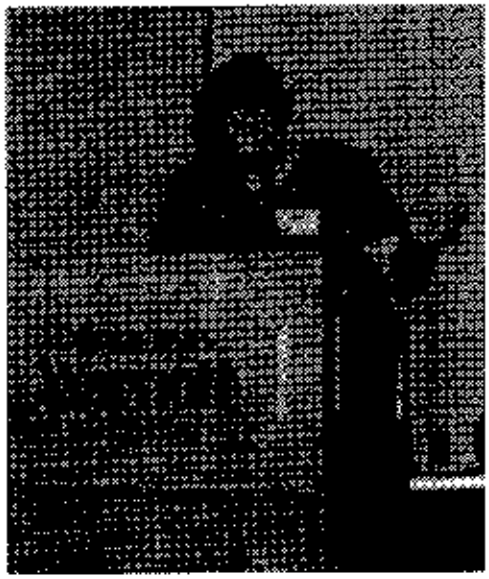
Program

MONDAY, OCTOBER 23

7:30 - 8:30 am **Continental Breakfast**
(Second Floor, Marriott Hotel)

8:00 am - 5:00 pm **Registration** (Third Floor Marriott Hotel)

8:00 am - 5:00 pm **Video Showcase/Resource Library**
(Sioux City Room)



8:30 - 10:00 am **PLENARY SESSION** (Salons D-E)
Conference Welcome
Tara Bartee, Chairman, Transportation Research Board Committee on Rural Public and Intercity Bus Transportation
Population Changes Affecting Rural Transportation Issues
Willis J. Goudy, Chairman, Department of Sociology, Iowa State University

10:00 - 10:30 am **Break** (Second Floor)

10:30 - Noon **CONCURRENT SESSION #1**

1. Alternative Fuels
Tom Maze, Iowa State University, (moderator)
Wendy Wool, Acurex Environmental
Impacts of Introducing Alternative Fuels into Transit Systems
Frank Anderson, Brazos Transit System
Analyzing, Evaluating and Selecting Alternative Fuels Utilized in Transit Clean Air Programs
William Hoekstra, Five Seasons Transit
Alternative Fuels Implementation

2. GIS and Rural Transportation
Lawrence Harmon, Independent consultant (moderator)
Joseph Hagge, CUTR, University of South Florida
Lawrence Harmon
FTA's GIS for Rural America Project
Gregory W. Tomsic, Rockwell International
GPS/GIS Based Information Management in Transit — Integration Considerations

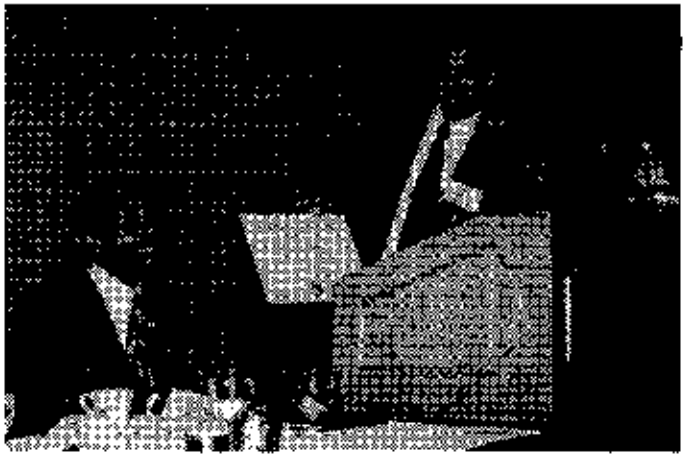
3. Public Involvement Strategies: More than a Meeting
Rosemary Mathias, Center for Urban Transportation Research (moderator)
Involving the Public in a Local Coordinating Board Workshop
Peter Damiano, University of Iowa
Transportation for Rural Elders and Access to Health Care
Jennifer Hardin, Center for Urban Transportation Research
Community Needs Assessment of Sun City, Florida
John Craig, Montana Department of Transportation
Public Involvement in Montana's Statewide Transportation Program

4. An Update on Rural Transportation Cooperative Research Program Topics
Jon Burkhardt, Ecosometrics, Inc., (moderator and speaker)
Service Delivery Systems in Rural Passenger Transportation
Frank Spielberg, SG Associates
Estimating the Demand for Rural Passenger Transportation
Roy Lave, SYSTAN, Inc.
Paratransit Software — Hard Choices

5. Building a Stable Funding Base in a Dynamic Setting: Coordination of Passenger Transportation
Jeffrey Webster, Fresno Rural (moderator)
Paul Hamilton, Shoshone and Arapahoe Nations Transportation Authority
Peter Schauer, Peter Schauer Associates

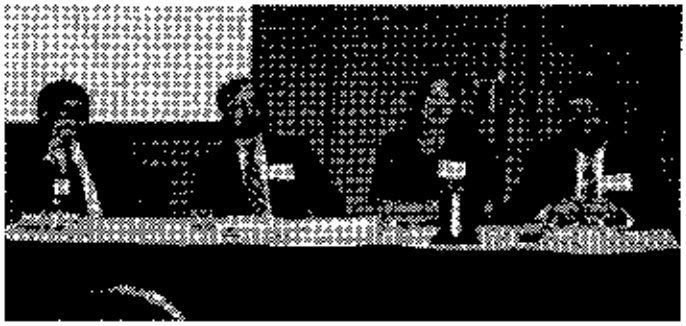
6. Planning, Designing, and Constructing a Facility that Meets Your Needs
Bob Goble, CGA, moderator
Linda Wilson, JAUNTS, Inc.
Planning a Facility: Do's and Don't's
Van Chestnut, Advance Transit

Facilities Development
Charles Glover, North Carolina Department of Transportation
Intermodal Facilities



Noon - 2:00 pm **Lunch** (Salons D&E)
Presentation of Administrator's Award
Gordon J. Linton, FTA Administrator
Rick Evans, RAE Consultants, Chairman
Mary Martha Churchman, FTA, Co Chairman

Noon - 5:30 pm **Vendor Exhibit**
(Exhibit Hall, Third Floor)



2:00 - 3:30 pm **CONCURRENT SESSION #2**

1. Update on Section 18i — the Intercity Bus Policy
Fred Fravel, KFH Group (moderator and speaker)
Mary Martha Churchman, Federal Transit Administration
Randy Isaacs, Isaacs and Associates
Charles Zelle, Jefferson Lines

2. Ride Tracking
Jeffrey Webster, Fresno Rural Transit (moderator)
Robert Tanenhaus, Information Management International, Inc.

3. Issues Around Headstart Transportation
Jon Burkhardt, Ecosometrics, Inc. (moderator and speaker)
Dianne McSwain, Department of Health and Human Services
Human Services Transportation: The Future of the Joint DHHS/DOT Coordinating Council
Michael McGrady, National Head Start Association
Richard Garrity, Richard Garrity and Associates, Inc.
North Carolina Head Start Transportation Study

4. Effective Participation in Rulemaking
Tara Bartee, Florida Department of Transportation (moderator)
Federal Transit Administration, Office of General Counsel

5. FTA RTAP National Program Preventive Maintenance Module — Part 1
Beth Denniston, FTA RTAP National Program (moderator)
Michael Mobey, Kalamazoo Public Schools

6. Update on Project ACTION in Rural America
Robert Carlson, Project ACTION (moderator)
Speakers to be announced

3:30 - 4:00 **Break in Vendor's Area** (Exhibit Hall)

4:00 - 5:30 **CONCURRENT SESSION #3**

1. Disaster Planning and Practice for Rural Transit Systems
Erskine Walther, Management Information and Research (moderator)
David Knight, Sonoma County Transit
Tom Roberts, Easy Lift, Santa Barbara

2. Rural Transit in Resorts and for Tourism Events
Rick Evans, RAE Consultants (moderator)
Dan Cole, The Fred Harvey Transportation Co., Grand Canyon National Park
Monya Merritt, Intracity Transit, Hot Springs, Arkansas
Gary Gleason, Roaring Fork Transit Agency, Aspen, Colorado

3. Medicaid Practica
Jon Burkhardt, Ecosometrics, Inc. (moderator and speaker)
A Review of Innovative State Medicaid Transportation Programs
Dottie Ford, Washington State Medical Assistance Administration
Medicaid Transportation Brokerage in Washington State
Ken Graska, Vermont Public Transit Association
Medicaid Transportation in Vermont

4. Limiting Liability in Personal Injury Accidents
Tom Maze, Iowa State University (moderator)
Kathleen Waggoner, Iowa State University
Limiting Liability in Personal Injury Accidents

5. FTA RTAP National Program Preventive Maintenance Module — Part 2 -
Beth Denniston, FTA RTAP National Program (moderator)
Michael Mobey, Kalamazoo Public Schools

6. How to Get the Most Out of Your National or State Association
Craig Cole, Topeka Transit, (moderator and speaker)
David Marsh, CARTS, Austin, TX
Bob Bourne, Cy-Ride, Ames, IA
Steve Feigenbaum, Kansas Public Transit Association

5:30 - 7:30 pm **Reception in Vendor Area** (Exhibit Hall)
Open Evening —
Court Avenue Crawl - Visit one of Des Moines favorite night spots, just two blocks south of downtown. ADA transit available.

TUESDAY, OCTOBER 24, 1995

7:30 - 8:30 am **Continental Breakfast**
Vendor Area (Third Floor)

8:00 am - 5:00 pm **Video Showcase/Resource Library**
(Sioux City Room)

10:00 am - 5:30 pm **Vendor Showcase**

8:30 am - 10:00 am **CONCURRENT SESSION #4**

1. Ride Sharing
David Ricketts, CAMBUS, University of Iowa, Moderator and Speaker
Michelle Byrne, CAMBUS, University of Iowa
Jolene Lettow, Des Moines Metro

2. Disaster Recovery
Erskine Walther, Management Information and Research (moderator and speaker)
Preparing to Survive
Stephen Spade, Des Moines Metro
Disaster Recovery
Barry Mosley, Albany- Dougherty Planning Commission
Disaster Recovery

3. Implementation of ADA
Russell Thatcher, EG & G Dynatrend (moderator)
Gary DeLorme, Federal Transit Administration
ADA Implementation — A National Overview
Fred Fravel, KFH Group
Status of Intercity Bus Access Regulations
Peter Hallock, Iowa DOT
ADA Implementation and Impacts in Iowa

4. Research Needs of Rural Transit Systems — Part 1
Tara Bartee, Florida DOT (moderator and speaker)

5. Transportation Coordination — Making It Work for You — Part 1
Beth Denniston, FTA RTAP National Program (moderator)
Cindy Johnson, STAR, Rock Springs, WY

6. Conversation with Administrator's Award Winners
Rick Evans, RAE Consultants (moderator)
Gary Gleason, Roaring Fork Transit Agency
Boyd Thompson, Putnam Association for Retarded Citizens (ARC Transit, Inc.)
Michael Mobey, Isabella County Transportation Commission
Wendell Edwards, Choanoake Public Transportation Authority

10:00 - 10:30 **Break in Vendor Area**

10:30 - Noon **CONCURRENT SESSION #5**

1. What's Being Done to Improve the Image of Transit?
Tom Mauser, Colorado Department of Transportation, Transit Unit (moderator)
Linda Lovejoy, Wisconsin Department of Transportation, Public Transit Section
Kathy Anderson, AASHTO Multi-State Technical Assistance Project (MTAP)

2. It's a Disaster — and You Are the Victim
Jeffrey Webster, Fresno Rural Transit (moderator)
John Monson, Mayflower Contracting
Jim Emerson, Emerson Consulting

3. Building Quality Service
Beth Denniston, FTA RTAP National Program (moderator)
Marj Walsh, formerly of Caravan, Fort Collins, CO

4. Research Needs of Rural Transit Systems — Part 2
Tara Bartee, Florida DOT (moderator and speaker)

5. Transportation Coordination — Making it Work for You — Part 2
Beth Denniston, FTA RTAP National Program (moderator)
Cindy Johnson, STAR, Rock Springs, WY

6. Issues around Headstart Transportation
Jon Burkhardt, Ecosometrics, Inc. (moderator and speaker)
How to Bring Head Start Transportation Services Up To Speed
Dianne McSwain, U. S. Department of Health and Human Services,
Human Services Transportation: The Future of the Joint DHHS/DOT Coordinating Council
Bill Wilson, DHHS/ACF/ACYF/Head Start
Coordinating Head Start Transportation

Sarah Greene, National Head Start Association
Richard Garrity, Richard Garrity and Associates, Inc.
North Carolina Head Start Transportation Study

Noon - 2:30 pm **Lunch in Vendor Area**

TOURS AVAILABLE
Sign up for these tours at the Information Area (Waterloo Room). Noon tours take box lunch on bus.

Noon - 2:30 pm 1. **Cy-Ride Facility in Ames**

Noon - 1:30 pm or 1:00 pm - 2:30 pm **2. Tour Des Moines Metropolitan Transit Authority Facility along with Global Positioning Project Demonstration**

3:00 - 4:30 **CONCURRENT SESSION #6**

1. Intercity Bus Success Stories
Fred Fravel, KFH Group (moderator and speaker)
Robert Shellenberger, Pennsylvania Department of Transportation
Coyd Walker, Denver Coaches, Scotts Bluff, Nebraska
Bill Strawn, Texas Department of Transportation
John Brandal, DART, Fort Dodge, Iowa

2. U.S. Department of Health and Human Services Transportation Policy
Dianne McSwain, U.S. Department of Health and Human Services (moderator)
Joyce Jackson, Office of Medicaid Policy, Health Care Financing Administrator
Medicaid Transportation Policy
Kathleen Steele, U. S. Department of Health and Human Services
DHHS Transportation Policy

3. Drug and Alcohol Testing
Kenneth M. Will, AdMed, Ltd.
Drug and Alcohol Testing Compliance

4. Bus Safety
Jeffrey Webster, Fresno Rural Transit (moderator)
Jim Emerson, Emerson Consulting

5. Financial Management Guidelines for Rural, Small Urban, Specialized Public Transit Providers
Kathy Anderson, AASHTO Multi State Technical Assistance Project (MTAP) Coordinator (moderator)
Charles Glover, North Carolina Department of Transportation
Richard Garrity, Richard Garrity and Associates

6. Coordination of Public Transit and School Bus Transportation
Donald N. Tudor, South Carolina Department of Education (moderator and speaker)
Sheldon Crum, CGA Consulting Services, Inc.

6:00 pm **Depart Marriott Hotel for Evening Entertainment**
(Transportation Provided)
Harvest Festival and Barn Dance - Dress is casual - denim, if you have it! Evening temperatures may necessitate wearing a jacket.

WEDNESDAY, OCTOBER 25

8:30 - 10:30 am **Roundtable Session by Interest Group**
(Davenport and Dubuque Rooms)
Donald N. Tudor, South Carolina Department of Education (moderator)

10:30 - 11:30 **PLENARY SESSION**
(Davenport and Dubuque Rooms)
Rural Mobility at the Crossroads - Where to Go from Here

Keynote Address

nges Affecting Rural Transportation Issues

Willis P. Goudy, Ph.D.
Chair, Department of Sociology
Iowa State University
Ames, Iowa

Population Changes Affecting Rural Transportation Issues

Willis P. Goudy, Ph.D.
Chair, Department of Sociology,
Iowa State University, Ames, Iowa
(Summary prepared by Jennifer Hardin, Center for Urban Transportation Research (CUTR))

Tara Bartee opened the plenary session with a welcome to all the conference participants. Willis Goudy, Ph.D., from Iowa State University was then introduced. Prof. Goudy is chair and professor of the Sociology department. He also oversees the research conducted at the university's Center for Census Services.

Prof. Goudy presented a portrait of Iowa in terms of demographics to illustrate the changes taking place in rural areas of the United States. He also compared the situation in Iowa with nationwide demographics. Prof. Goudy explained that Iowa is at the forefront of the changes taking place in the rural United States, and called on conference attendees to use their imaginations to transfer data to other rural areas in the country.

The population of Iowa has been increasing since 1990. However, during the period from 1980 to 1990, Iowa experienced a significant decline in population--a 4.7 percent decline. From 1990 to 1994, the population of Iowa increased by 52,000. This slow but steady growth is quite typical of states with large rural populations. However, Prof. Goudy explained that it would take a few decades to return to population levels similar to that prior to the 1980s. He explained that other states in the same region also have been experiencing population growth since 1990 (Minnesota has experienced the greatest rate of population growth with a 4.4 percent increase), but Iowa has not been growing as rapidly as other states in the region. One explanation offered for Iowa's slower rate of population growth was the fact that Iowa does not have any large urban center of dominance like other states in the region to influence the rate of in-migration.

In terms of the nation as a whole, some areas of the United States have seen population increases larger than those of the United States, as a whole. The areas with the largest rates of population growth are the West and the Southeast. In contrast, the Midwest and the Northeast have been increasing less rapidly than the United States as a whole. None of this is random, however, as out-migration has been occurring in the Midwest and Northeast as people move to the West and Southeast.

The differences between Iowa and the nation as a whole make a great deal of sense when one compares the rate of births, death, marriages, and divorces. While the United States averages 15.3 births per 1000 residents, Iowa's birth rate is only 13.1. The reverse trend is apparent in rates of death. The United States has an average 8.8 deaths per 1000 residents, whereas the death rate for Iowa is 9.8 per 1000 residents. The state of Iowa also experiences fewer marriages (8.1 per 1000 residents) and fewer divorces (3.8 per 1000 residents) than the Unites States (9.1 and 4.6, respectively). The key factor affecting these variables in Iowa is age. Iowa's population is older than the population of the nation as a whole.

From 1980 to 1990, Iowa had 146,000 more births than deaths. In addition, since 1910 Iowa has consistently seen more out-migration than in-migration. However, Prof. Goudy explained that Iowa adds value to their number one export (people), because education is highly valued in the state; that is, people are leaving Iowa after graduating from college.

Significant population declines have been experienced in both urban and rural areas of Iowa. Iowa is one of only four states in the nation that actually experienced a decline in the urban population from 1980 to 1990. Iowa's rural population also decreased by 9.3 percent during the period. This decline is in direct contrast to the national trend where the country's rural population is gaining. Iowa has the third largest population of farm dwellers in the United States. However, from 1980 to 1990 Iowa's farm population decreased by 34.4 percent. This was the 13th largest decline in farm population recorded in the nation. Therefore, while most states in the nation saw population increases in both urban and rural areas, only Iowa and West Virginia reported declines in both urban and rural populations.

Rural Iowa is not a homogenous are; differences do exist in the rural population. Prof. Goudy described three different groups of rural residents. The first group includes the population that people most often think of when they talk about rural areas--the farm population. This rural population in Iowa has experienced significant decline in terms of numbers since 1940.

The second rural population group in Iowa includes people living in small towns of 2,500 residents or fewer. The size of this population has varied little across the decades and residents have not really left these small towns as the media has claimed. Prof. Goudy emphasized that many of these residents demand transportation services and therefore, have a significant effect on rural transportation.

The third group of rural residents is one that Prof. Goudy described as "country people." These residents do not live on farms and they do not live in small towns. The size of this population in Iowa has consistently increased each year so that by 1990, this population was larger than the population of Iowa residents living on farms. The population of "country people" in Iowa is bimodal in the sense that these residents either live in great affluence or extreme poverty. Regardless of their economic standing however, it is clear that these residents also demand services such as snow plows and even transportation.

In conclusion, Prof. Goudy emphasized that age is the key to the changes occurring in Iowa. The over 54 population has been increasing in size each decade. Conversely, the segment of the population that is less than 15 years of age now has the lowest proportion of youth ever in the state. The segment of the population in Iowa that is over 74 years of age is also rapidly increasing, while the younger than 5 population has been decreasing since 1960. Prof. Goudy described this phenomena as the "baby-bust," and explained that in 1990 these two population lines crossed so that Iowa now has more residents over the age of 74 than residents less than 5.

The implications of the this phenomena for rural counties in Iowa and rural counties in the United States are many. Perhaps at the forefront is the temptation for legislatures to respond to these numbers by removing money from programs such as education and rural transportation in order to fund health care and other services for elders. The age issue will be very important in the future of rural transportation as the greatest increases in the future population will be in the 65 and over population of the United States. Rural transportation advocates will need to understand the changes taking place in the population configuration of rural areas and ensure that the vital role of transportation in lives of rural residents is communicated to state legislatures throughout the nation.

Concurrent Session #1
1. Alternative Fuels

Historic and Current Perspectives on Clean Air and Alternative Fuel Programs

Frank L. Anderson, Jr.
Alternative Fuels Director
Brazos Transit System
Bryan, Texas

HISTORICAL AND CURRENT PERSPECTIVES ON CLEAN AIR AND ALTERNATIVE FUEL PROGRAMS

I. OUTLINE OF PRESENTATION

A. Ozone/Smog

Working Definition of Ozone/Smog

OZONE/SMOG IS A HAZY TOXIC OXYGEN GAS MIXTURE CONTAINING MICROSCOPIC DROPLETS, SOLID PARTICLES, AND HARMFUL COMPOUND EMISSIONS THAT OCCURS WHEN OZONE (03) COMBINES WITH REACTIVE HYDROCARBONS, NITROGEN OXIDES (NOX) AND CARBON MONOXIDE (CO) IN A SUNLIGHT PHOTO CHEMICAL REACTION.

Four Major Categories of Health Problems

1. ABNORMAL RESPIRATORY FUNCTIONS - COUGHING, WHEEZING, CHEST PAINS
2. INCREASED EYE IRRITATION, NASAL CONGESTION, SINUS AND ALLERGY PROBLEMS
3. DECREASED RESISTANCE TO INFECTION
4. RESPIRATORY DISEASE AND DEATH (IN LONG TERM EXPOSURE SITUATIONS)

B. Harmful Vehicle Emissions, Primary Sources/Others

Primary Harmful Emissions

1. Carbon Monoxide
2. Nitrogen Oxides
3. Reactive Hydrocarbons, and
4. Particulate matter.

Depending upon the clean burning alternative fuel utilized, most of these emissions are reduced by 30% - 90%. In the case of compressed natural gas (CNG), liquefied petroleum gas (LPG) or PROPANE, and liquefied natural gas (LNG); a 60% - 90% reduction is usually experienced. With other alternative fuels, a 30% - 60% reduction is usually experienced. Also, all alternative fuel clean burning characteristics are most effective when utilized in a vehicle having a well tuned motor and a catalytic exhaust system.

Other Harmful Emissions

1. Sulfur dioxide coming from diesel,

2. Toluene and benzene coming from unleaded gas and diesel,

3. Formaldehyde coming from ethanol and methanol, and methyl tertiary butyl ethers, and

4. Ethyl tertiary butyl ethers coming from reformulated gas and oxygenated gas.

C. Basic Environmental Protection Agency (EPA) Clean Air Act, regulations/findings

1. In 1970 the EPA enacted its first federal clean air regulations that mandate maximum safe ozone levels at **.08ppm** due to large numbers of urban air areas with poor air quality.

2. In 1977 the EPA required specific cities with poor air quality to implement and develop their "city" clean air compliance program.

3. In 1979 the EPA raised maximum safe OZONE levels to .12ppm.

4. In 1987 an EPA air study found that 1/3 of all Americans still reside in city/urban areas exceeding OZONE levels of .12ppm.

5. In 1990 the EPA found that 119 urban areas, over 133,000,000 people are breathing unhealthy air and 50% - 90% of NOX and CO are caused by cars, trucks, and buses and as a result of these negative findings, the EPA enacted the "Clean Air Act of 1990" and Mandated more stringent emission regulations on non-attainment cities, trucks, and buses.

D. Primary Reasons Transit Providers Operate Alternative Fuel Programs

1. Voluntary - We voluntarily operate an alternative fuel program because we want to improve our local air quality and/or enhance our position as a civic leader.

2. Mandatory - We are mandated to operate an alternative fuel program by governmental regulations.

3. Financial - We operate an alternative fuel program because we have received governmental funding assistance or we desire to reduce fuel costs and vehicle maintenance/repair costs.

4. Domestic Fuel Demand - We operate an alternative fuel program because we want to stimulate more demand on domestic rather than foreign fuels.

E. Basic planning guide for prospective alternative fuel providers

1. Vehicle Budget - How many new alternatively fueled or alternatively fuel converted vehicles can we afford?

2. Vehicle Fuel System - Are mono, bi-fueled or dual fueled vehicle fueling systems desired?

3. Fuel Availability/Cost - What fuel is readily available that is affordable?

4. Vehicle/Fuel Bid Specifications - The specifications should be concise and meet the needs of your specific program and be in compliance with government regulations.

5. Researching and Visiting Currently Operating Alternative Fuel Programs - These may be key factors in determining the potential success of your planned alternative fuel program.

6. Training - You must have appropriate staff or hire outside consultant staff to provide necessary and regulation required safety training to operational/ maintenance staff.

7. Good Fuel Provider Working Relationships - These are very important in maintaining good consistent quality fuel and timely fueling operations.

F. A summary of alternative fuels and low emission electric vehicles

Primary Alternative Fuels, Blended Alternative Fuels and Low Emission Electric Vehicles

1. CNG, LNG and LPG

(a) are normally the cleanest/burning low cost alternative fuels,
(b) normally reduce maintenance/repair costs,
(c) have better safety records than methanol or ethanol due to non-toxic, corrosive characteristics, and
(d) only LPG is usually readily available in both urban and rural areas.

2. Methanol, Ethanol, M-85, E-85

(a) are normally higher priced alternative fuels which can be supported by governmental tax benefits or subsidy programs.
(b) may possibly increase maintenance/repair costs,
(c) do not have as good as safety record as CNG, LNG, or LPG due to corrosive toxic characteristics,
(d) contain an extra formaldehyde emission,
(e) are usually only readily available in some rural and urban areas, and
(f) are considered moderately good clean burning fuels.

3. Biodiesel

(a) it is usually a blend of diesel and soybean oil (70% diesel, 30% soybean oil),
(b) if not subsidized, it can be very expensive,
(c) it is a moderately good clean burning fuel, and
(d) it is usually only readily available in some rural and urban areas and may require special fuel sponsor shipments or deliveries.

4. Reformulated Gas, Oxygenated Gas

(a) usually are only readily available in SMOG areas and/or states requiring its purchase or giving tax incentives for its purchase,
(b) normally cost 10-25 cents more per gallon than unleaded gasoline, and
(c) contain extra harmful emission MTBE (Methyl Tertiary Butyl Ether), ETBE (Ethyl Tertiary Butyl Ether) that specifically and significantly reduces carbon monoxide emissions.

5. Electric Vehicles

(a) have very low emissions,
(b) are expensive to very expensive,
(c) have limited mileage range (60-80 miles) without battery recharging,
(d) have limited battery life (3-4 years), and
(e) are not usually practical for large bus applications.

6. Hybrid Electric Vehicles

(a) have very low emissions,
(b) are expensive to very expensive,
(c) have extra mileage range (usually travels 120-150 miles without battery recharging,
(d) have longer battery life, and
(e) have a high efficiency trickle charging system which is run by separate alternative or non-alternative fuel combustion engine which powers a generator that provides electricity to an electric propulsion system.

II. Video on Brazos Transit System - 12 minutes long

Breifs, Journals, Magazines, Regulations, Reports, References

1. Alternative Fuels Transportation Briefs, Produced by the Center for Global Studies, (713)-363-7913, a Division of the Houston Advanced Research Center (HARC), January, February, August, (1991), May, (1992).

2. American Gas Association, Natural Gas Vehicles, Fact Sheet NGV (1-2), December, (1990).

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5. Federal Register, Part IV Environmental Protection Agency, 40CFR Parts 85 and 86 Air Pollution Control and Emission Standards for New Motor Vehicles, Urban Buses, and Heavy - Duty Engines; Proposed Rules, September 24, 1991.

6. Gas Research Institute, Assessment of Envroimental Health, and Safety Issues Related to the Use of Alternative Transportation Fuels, Final Report, October 10, (1989).

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8. Passenger Transport Magazine Alternative Fuels Special Feauture articles, September 2, (1991).

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11. Siuru, William D. Jr., Using Compressed Natural Gas, Mass Transit Magazine, September / October, (1993).

12. Stewart, Julie, Natural Gas Is a Clean Fuel For Vehicles, American Gas Association News, November, (1990).

13. Strandberg, Keith, Fueling the Future of Mass Transit, Mass Transit Magazine, March / April, (1993).

Concurrent Session #1
2. GIS and Rural Transportation

GIS and Rural Public Transportation

Lawrence J. Harman
Senior Research Consultant
Moakley Center for Technological Applications
Bridgewater State College
Bridgewater, MA

GIS and Rural Public Transportation

The purpose of this presentation is to briefly describe two activities of the Federal Transit Administration (FTA) that affect the use of geographic information systems (GIS) and rural public transportation in the United States. The first is a national survey of GIS use in transit and the second is the development of a national Transit GIS database in the U.S.

1. FTA National Survey of GIS Use.

In 1995, the Federal Transit Administration conducted a survey of GIS use in transit by transit agencies (TAs) and metropolitan planning organizations (MPOs) in the United States. The survey built on a previous study conducted in 1991. The objective of the survey was to inventory the use of GIS in transit planning and operations throughout the nation in four areas:

- **current use of GIS,**
- **spatial data resources,**
- **diffusion of GIS technology, and**
- **future plans for implementation.**

The 1995 survey greatly expanded the size of the population from the 1991 survey but condensed the scope of the survey to a four page interview instrument. In 1995, 269 entities were contacted and 202 survey instruments were completed. This included 63 completed interviews from the original 71 contacts in 1991. The 1995 survey contacted all transit agencies and MPOs in urbanized areas with a population of 200,000 people or above. In addition, 92 transit agencies without GIS were identified in urbanized areas under 200,000 and in non-urbanized areas of the country.

Respondents to the survey question, "Does your agency currently use GIS?" were grouped by fleet size (maximum peak hour vehicle). (See Figure 1. "Current TA GIS Use by TA Fleet Size".) Nearly every transit agency with a very large bus fleet (500 and above), indicated that they were using GIS in some fashion. Below that threshold GIS use dropped markedly. When questioned on future plans for using GIS, that picture did not change greatly. (See Figure 2. "Planned TA GIS Use by TA Fleet Size.") It is worthy of note that small operators in the below 50 vehicle fleet category showed near universal avoidance of implementing GIS technology. Given the GIS products on the market in early 1995, their cost, skill level requirements, and supporting GIS data sets; it is easy to hypothesize why the GIS products have not penetrated the small bus operator market.

Of those operators and planning agencies indicating their use of GIS in the survey, the current and planned applications of GIS are extraordinarily diverse. (See Figure 3 "GIS Applications - 1995" and Figure 4 "Plans for GIS Implementation.") In some cases, the application depends on the type of entity. Transit agencies predominate in areas related to transit operations, *e.g.* scheduling and run cutting, transit pass sales, fixed route and

Current TA GIS Use by TA Fleet Size

Does your agency currently use GIS?

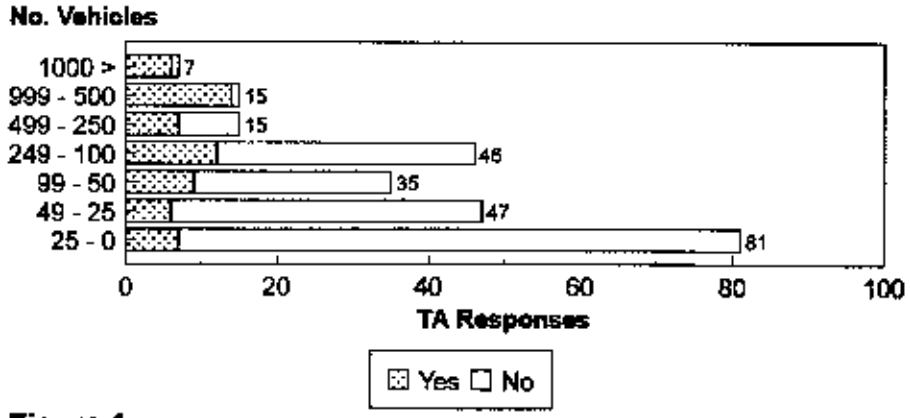


Figure 1

Planned TA GIS Use by TA Fleet Size

Are you considering implementation of GIS . . . ?

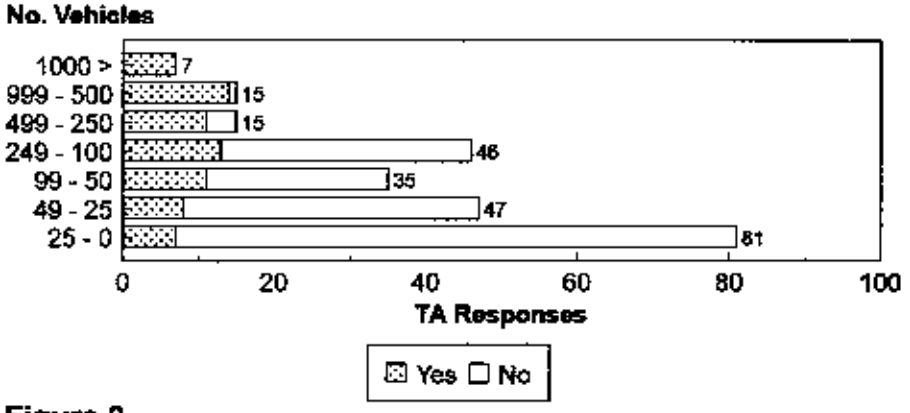


Figure 2

GIS Applications - 1995

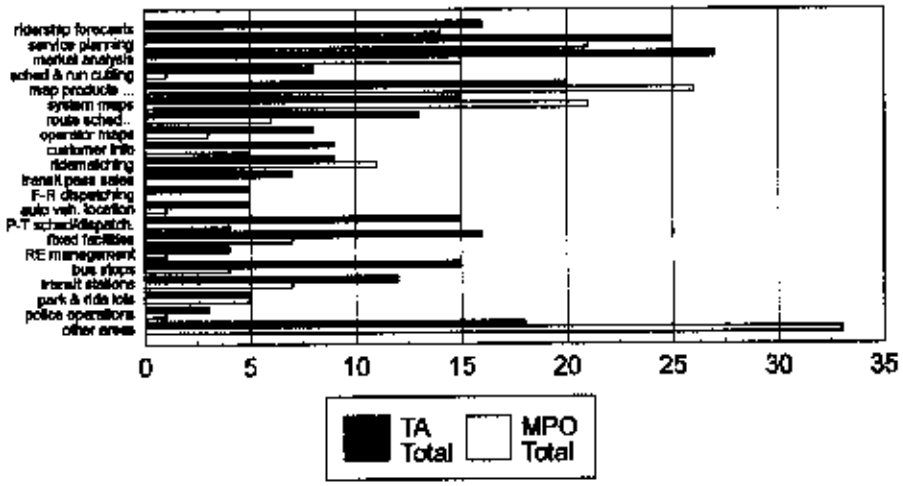


Figure 3

Plans for GIS Implementation

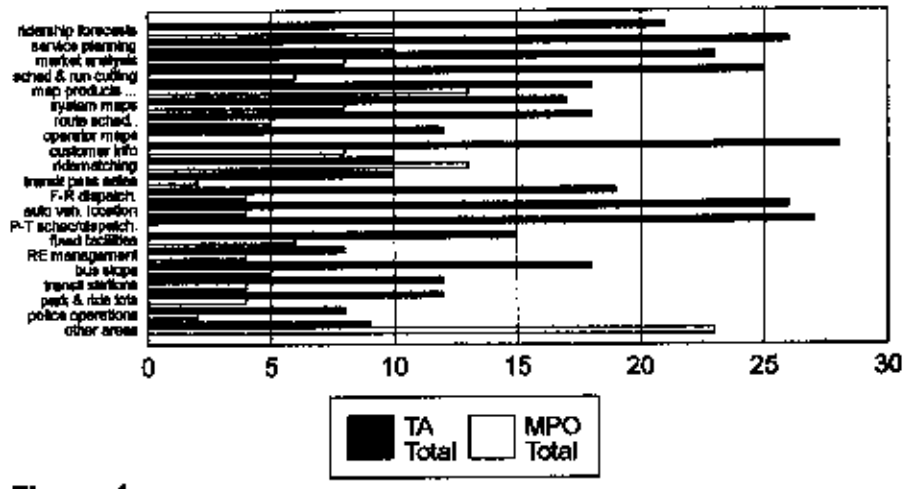


Figure 4

dispatching, and asset management (fixed facilities and bus stop inventories). MPO GIS uses are strongest in forecasting ridership, service planning, and development of map products.

An interesting pattern emerges when reviewing the TA and MPO future GIS implementation plans. The TAs show a strong interest in implementation of GIS across the broad spectrum of uses. Several areas are clear trend setters, however. All areas of operations planning are indicated in TAs future plans, especially, service planning , run cutting, market analysis, and ridership forecasting. However, use of GIS in operations is equally represented in a strong departure from current use. These include customer information, paratransit scheduling and dispatching, fixed route dispatching and automatic vehicle location and monitoring. The latter uses indicate the strong relationship between advanced public transportation technology (APTS) and GIS.

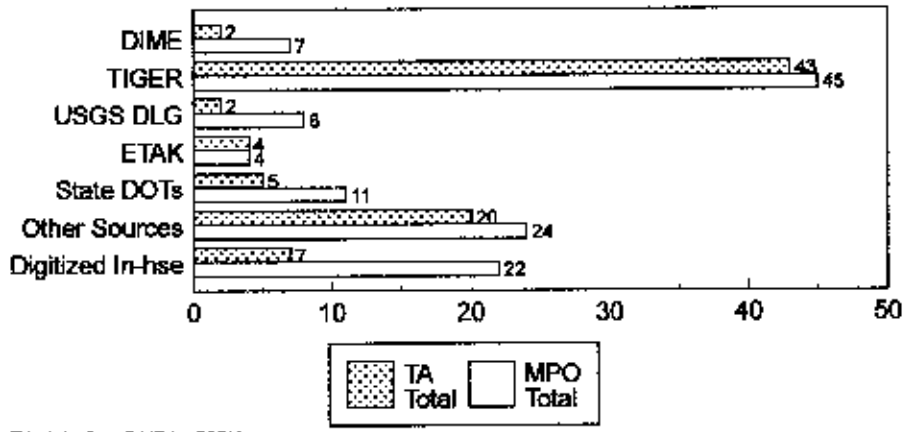
The sources of street data used by both the transit agencies and the MPOs, show a great reliance on the Bureau of Census's TIGER line files, although there is a clear indication of both TAs and MPOs looking to other sources for street data. (See Figure 5 "Street Data Source - 1995.")

The diffusion of GIS products into the transit and planning market show no domination by one vendor at this time. (See Figure 6 "GIS Products..") Clearly, ARC/INFO (ESRI, Inc. Redlands, CA) has a stronger presence in the MPOs market and TransCAD (Caliper Corp., Newton, MA) has a strong presence in the transit agency market. MapInfo (MapInfo, Troy, NY) has made equal sales in both markets. However, the numbers are too small and too many product improvements are coming out in this volatile GIS market to make any far-reaching judgements about vendor preferences from this survey.

2. FTA Bus Route GIS Database Project.

As a part of the development of the FTA Transit GIS Database project, the FTA has contracted with the Moakley Center for Technological Applications at Bridgewater (MA) State College for the development of a GIS Database of all the fixed route bus systems in the United States. Data collection and the initial building of the databases took place during the summers of 1994 and 1995 at the Center. Transit agencies throughout the US were called and, if they did not have their routes in a GIS database, were asked to send their system maps, route maps and schedules. For each system, student GIS analysts build a county street network from the Bureau of Census TIGER files in a PC/DOS-based GIS program called TransCAD (Caliper, Corp., Newton, MA). Using the TA-supplied routes maps, the students "selected" the street segments which contained each route and "saved" the "selected sets." In the first summer, the students either built a GIS database layer for each route or they used a vendor-supplied macro that converted the "selected sets" into a system that could be portrayed on a map. In the second summer, with the release of a Windows version of the GIS software appearing imminent, the student simply saved the selected sets of each route for future processing.

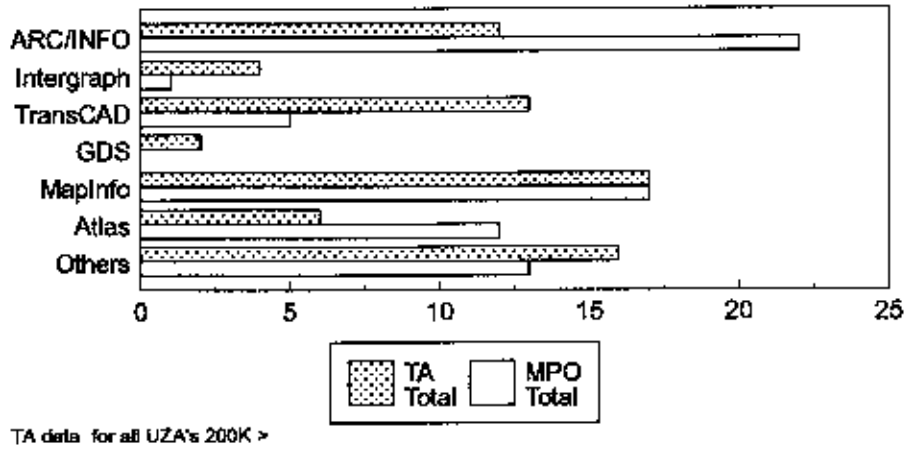
Street Data Source - 1995



TA data for all UZAs 200K >
MPO data for all UZAs 200K >

Figure 5

GIS Products in UZA 200K >



TA data for all UZA's 200K >
MPO data for all UZA's 200K >

Figure 6

Brockton (MA) Area Transit Authority

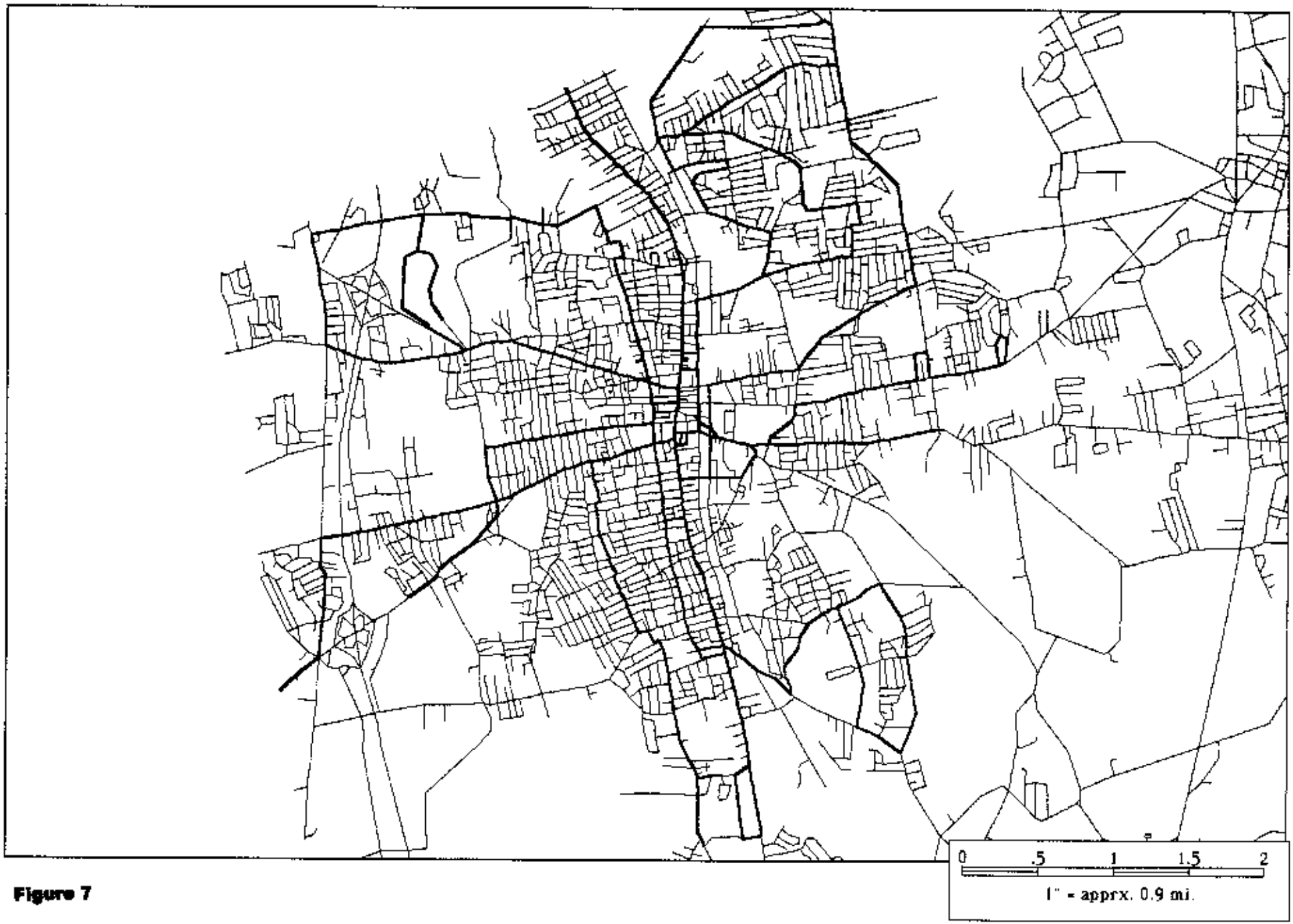


Figure 7

Margate (FL) Community Bus Service

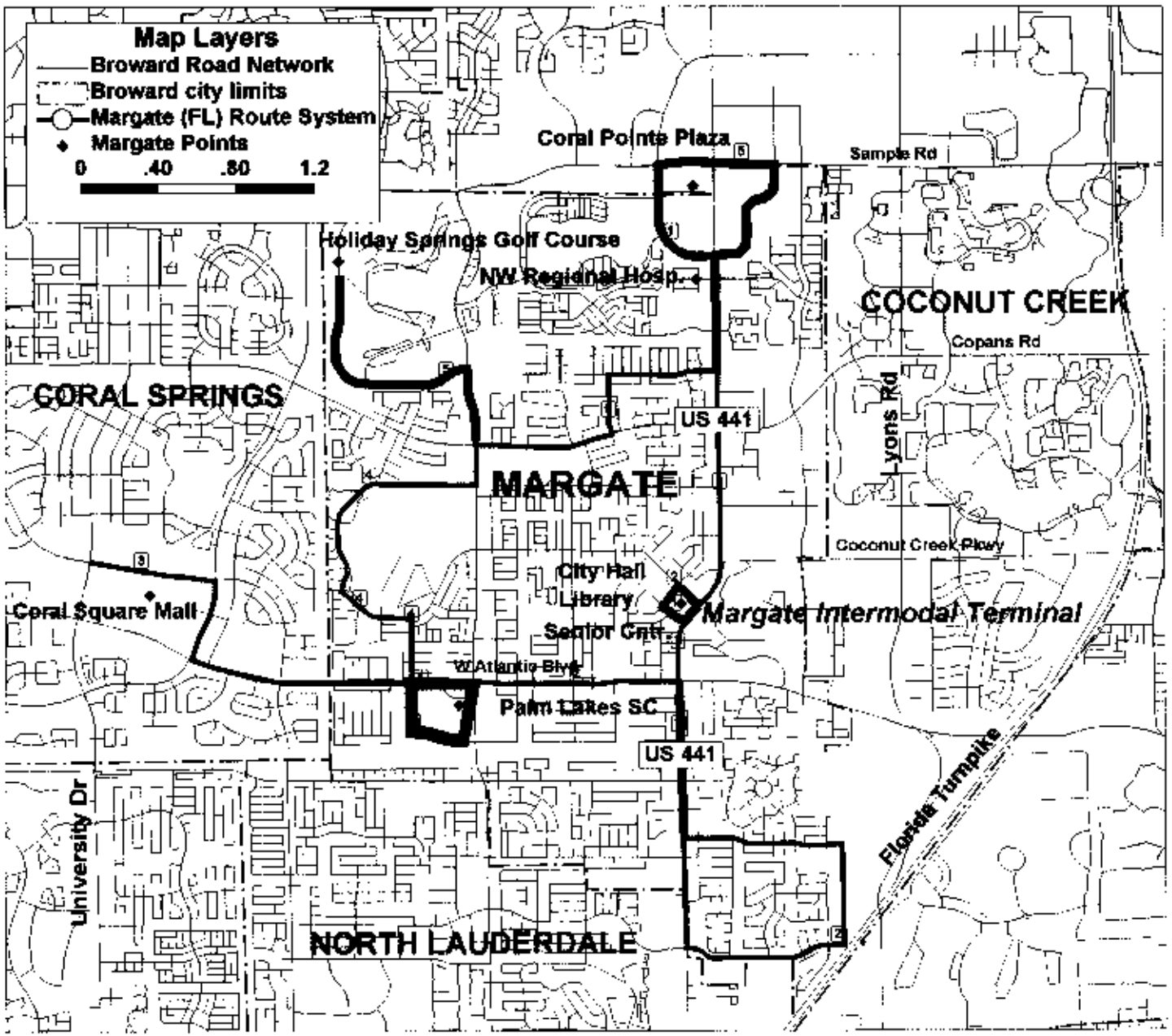


Figure 8

At the end of the summer of 1995, 42 TAs contacted indicated that they had their bus routes on a GIS database. Of those, twelve have submitted a database, of some type, to the Center. Of the remaining TAs in the country: 530 systems have had county street networks built in a GIS database and routes "selected", 14 are in "suspense" awaiting better data or suffer from severe data problems (*e.g.* lack of street names or illegible maps). The vendor has provided a "beta" release of the Windows version of their GIS software for the Center use along with a "macro" procedure that translates the DOS-based street database into a street network and creates a route system of the "selected route sets" on the Windows GIS. The Center is currently converting all 530 transit systems to TransCAD v. 3.0 route systems using this macro.

Figure 7 provides a map generated under the DOS-based GIS of the Brockton (MA) bus system. Figure 8 is a GIS map representation of the Margate (FL) community bus system using the windows-based GIS product. While the maps should be viewed in color to get the full benefit of their qualities, the windows version provides a significant improvement for transit applications in that routes which run down the same street can be "offset" so that all routes can be displayed. Other advantages are the graphic improvements provided by the windows interface and the ability to use relational database management capabilities for each route systems. While it is not part of the project, a robust set of transportation-specific analytical procedures is available for both the DOS and Windows-based GIS products.

As a part of the project, local applications of the FTA-developed GIS bus routes were created for prototypes in Broward County (FL) and Brockton (MA). GIS proved to enhance analysis and decision-making through 1) visualization and presentation, 2) database integration, 3) improved transportation analysis, and 4) implementation.

3. Reflections on GIS and Rural Public Transportation.

The two FTA-sponsored activities indicate an inordinate lack of GIS use in rural public transportation. Prior to mid-1995, the reasons for this lack of use were clear to anyone using GIS in transit applications. The GIS programs that could do the job adequately were too expensive ($10,000 or more), the transportation data to support applications *(e.g.* street networks and route systems) were too difficult to build and too costly to buy, and the software did not adequately present the transit service (*e.g.* routes were not off-set). Now, all that is about to change. The software will run from $400 - $3,000 that will be adequate for basic transit needs. The vendors are giving away data sets on CD ROM. The FTA is poised to have 530 fixed route systems and their underlying county street network in the public domain. The clear conclusion is that there has never been a better time to get into GIS at a transit property -- large or small..

Based on the experience of the two studies referenced in this presentation, the following advice is offered.

- **Have a clear objective(s) for your GIS application. Know what you want out of a GIS that will help you as a transit manager. It's easy to get fascinated by the technology.**

- **Make a commitment to an early investment in your knowledge of GIS. There is a significant learning curve that has to be attained before you are ready for production.**

- **Stay within your comfort zone for data management and analysis. Learn the fundamentals of database management software before you apply the spatial dimension through a GIS.**

Concurrent Session #1
2. GIS and Rural Transportation

GPS/GIS Based Information Management in Transit - Integration Consideration

Gregory W. Tomsic
Rockwell International

12th Annual National Rural Public Transportation Conference:

GPS and GIS: "State of the Art" & Rural Benefits

Rockwell

Agenda

- GIS and GPS -- Simply Put ...
- GPS/GIS -- a Natural Match
- What GPS/GIS Systems DO!
- Things to Look for in GIS
  - For potential Purchasers
- Rural Transit Benefits

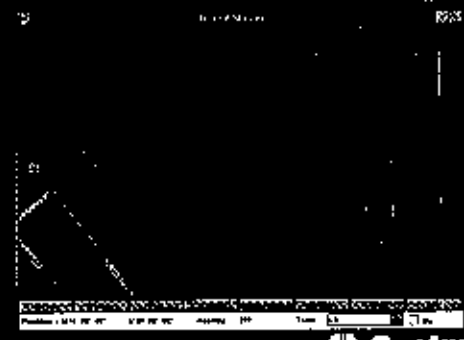
Rockwell

Exotic "GIS" is Simple !

- Tools Which Use/Store Geographic Position of "Things"
  - Streets
  - Routes
  - Clients
  - Vehicles, Other Assets, Points, etc.
- Now: Computer Based
  - Agile PC-Based Systems --Not Paper

Rockwell

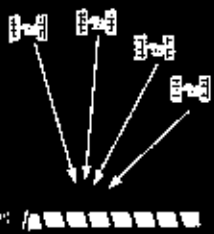
GIS for Transit -- Example



Rockwell

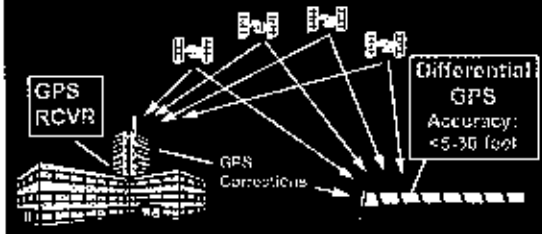
GPS is a "Bucket"

- 24 Satellites -- 11,000 Mi. Up
- GPS USER Equipment "Listens" to Free Signals:
  - Like an "FM-Receiver"
  - Uses 4 Satellites at Time
  - To Determine Latitude/Longitude
- GPS Equipment Provides:
  - Position (Latitude, Longitude, Alt, Time)
- Position Can be Reported Back to Dispatch Site & Mapped (on a GIS)



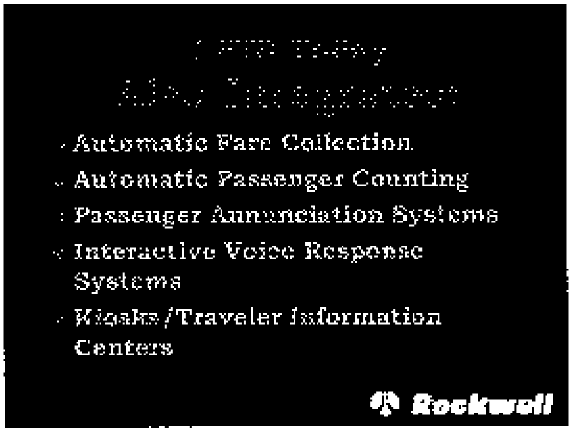
Rockwell

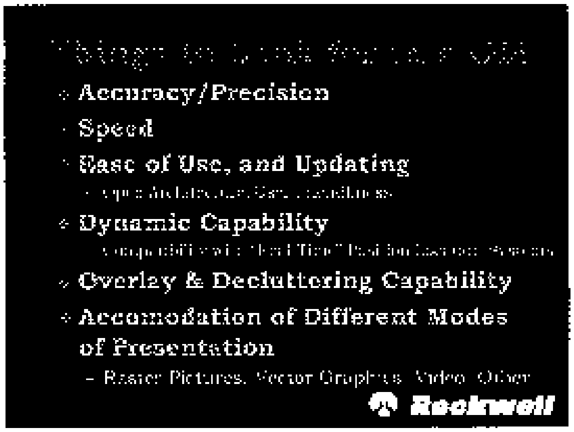
Making GPS More Accurate

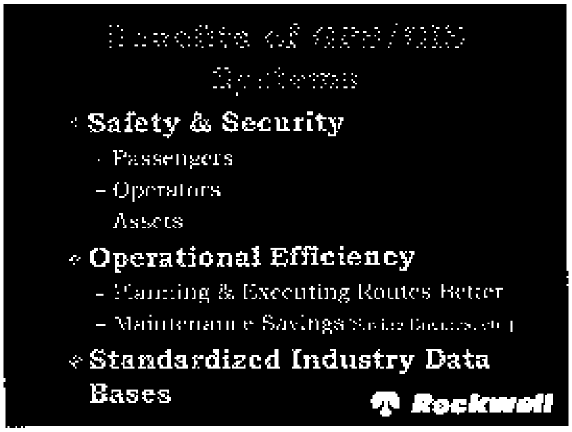


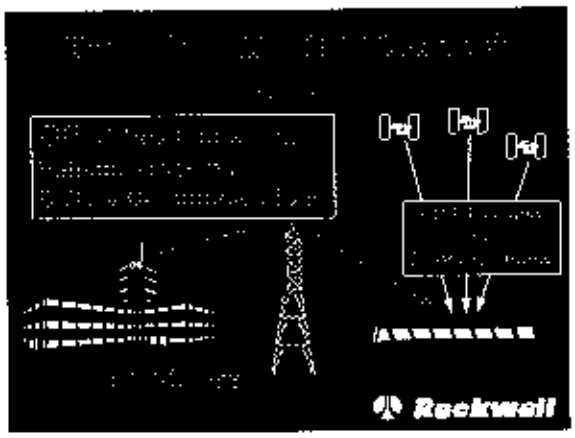
- Stationary GPS Receiver Resolves Errors
- Central Site Broadcasts Error Corrections
- Vehicle Unit Applies Corrections & Improves Results

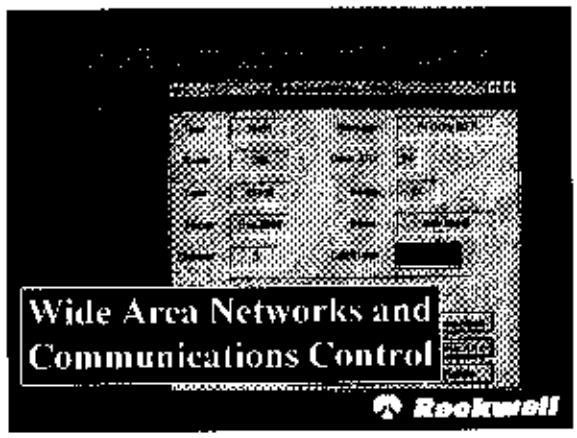
Rockwell

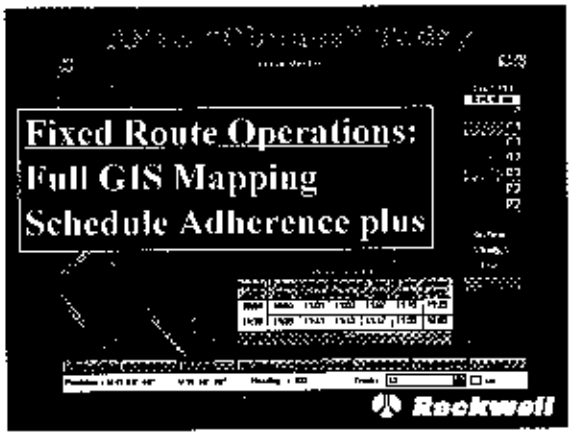

Automatic Fare Collection
Automatic Passenger Counting
Passenger Annunciation Systems
Interactive Voice Response Systems
Kiosks/Traveler Information Centers
Rockwell

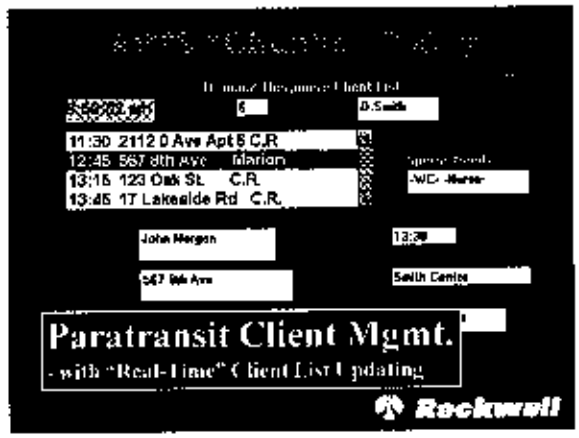

Accuracy/Precision
Speed
Ease of Use, and Updating
Dynamic Capability
Overlay & Decluttering Capability
Accomodation of Different Modes of Presentation
– Raster Pictures, Vector Graphics, Video, Other
Rockwell

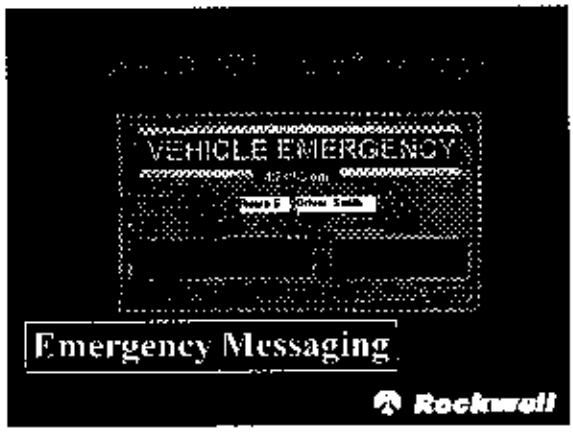

Safety & Security
– Passengers
– Operators
– Assets
Operational Efficiency
– Planning & Executing Routes Better
– Maintenance Savings
Standardized Industry Data Bases
Rockwell

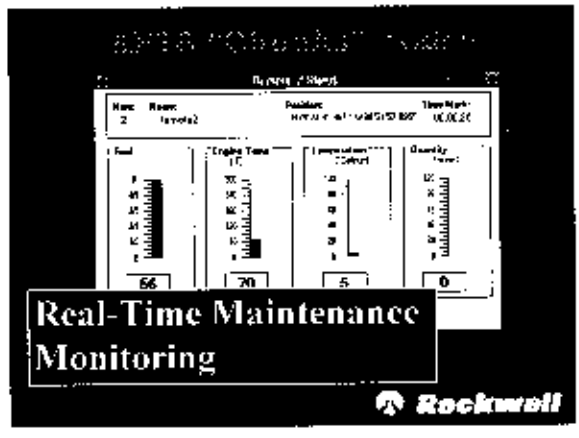

Rockwell


Wide Area Networks and
Communications Control
Rockwell


Fixed Route Operations:
Full GIS Mapping
Schedule Adherence plus
Rockwell


11:30 2112 0 Ave Apt 5 C.R
12:45 567 8th Ave Marion
13:15 123 Oak St. C.R.
13:45 17 Lakeside Rd C.R.
John Morgan
Paratransit Client Mgmt.
Rockwell


VEHICLE EMERGENCY
Emergency Messaging
Rockwell


Real-Time Maintenance
Monitoring
Rockwell

GPS & GIS -- "Natural Match"

- GPS Provides Geographically Referenced Position Info
- GIS (Geographic Information Systems) Provide a Method to Display GPS Info

Rockwell

Transit Has Led the Way in Many GPS/GIS Capabilities

Rockwell

GPS/GIS for Transit: ADVANCED PUBLIC TRANSPORTATION SYSTEM (APTS)

Rockwell

APTS -- "State of the Art" in GPS/GIS Systems

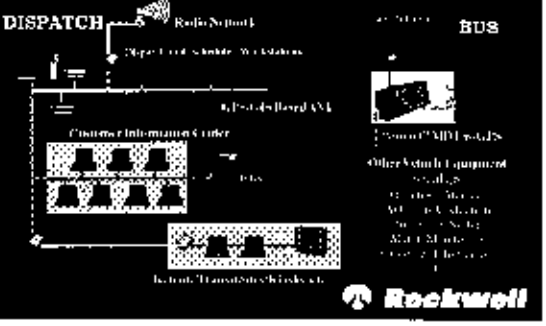
Rockwell

APTS Includes Things for ALL of Transit

- ✓ Vehicle Tracking
- ✓ Fixed Route Ops Systems
- ✓ Paratransit Ops Systems
- ✓ Passenger & Fare Systems
- ✓ Security Systems
- ✓ Maintenance Systems

Rockwell

A Typical Integrated GPS/GIS System Today



Rockwell

Concurrent Session #1
3. Public Involvement Strategies: More Than a Meeting

Transportation for Rural Elders and Access to Health Care

Peter Damiano
Director of the Health Policy Research Program at the University of Iowa Public Policy Center and
Associate Professor in Department of Preventive and Community Dentistry,
University of Iowa, Iowa City, Iowa

Community Needs Assessment of Sun City Florida

Jennifer Hardin
Post Graduate Research Fellow, Center for Urban Transportation Research (CUTR)
University of South Florida

Involving the Public in a Local Coordinating Board Workshop

Rosemary Mathias
Paratransit Program Manager, Center for Urban Transportation Research (CUTR)
University of South Florida

(Summary of all presentations provided by Rosemary Mathias)

TRANSPORTATION FOR RURAL ELDERS AND ACCESS TO HEALTH CARE

Peter Damiano
Director of the Health Policy Research Program at the University of Iowa Public Policy Center and
Associate Professor in Department of Preventive and Community Dentistry,
University of Iowa, Iowa City, IA

Providing access to health care for rural elders is an important role for rural transit systems in Iowa. The closing of some rural hospitals and the shortage of primary care physicians is some rural areas of the state increases the potential that elders may face transportation-related barriers to receiving care in rural areas. The purpose of this presentation was to discuss the methods used to study the effect of transportation on access to health care for rural elders age 75 and over in Iowa. Emphasis was placed on the attempt to gather input from the primary players in the issue: the rural elders themselves, the regional transit managers, and the directors of the Area Agencies on Aging. The role of an external advisory role in guiding the context of this study also was discussed.

Demographic data show that the rural Midwest is becoming less populous and older. As a population gets older, its need for health care services increases, a fact that makes access to health care a growing concern. On of the many dimensions of access to health care is the quality to physically travel to a doctor's office, hospital, or other health care facility. While this study addresses general issue surrounding rural elders' access to transportation, we pay special attention to their travel to obtain health care.

Rural elders use a variety of means to travel to obtain health care. Some are able to drive their own vehicles, others ride with family members, friends, or neighbors, and others require the services of public transportation. Our report focuses on public transportation. We examine how rural Iowans age 75 and over use public transit and discuss the nature and magnitude of their transit needs. We also assess the capacity of Iowa's public transit system to meet the needs of rural elders.

Research for this project was carried out at the University of Iowa Public Policy Center. Funding was provided by the U.S. Department of Transportation, University Transportation Centers Program. The research team has benefited greatly from its collaboration with an 11-member project advisory committee. This committee helped to focus the issues to be addressed, and its members shared their insights throughout the research process.

Damiano, P.C. et al., Transportation of Rural Elders and Access to Health Care, University of Iowa Public Policy Center for the Midwest Transportation Center, Iowa City, Iowa (1995).

COMMUNITY NEEDS ASSESSMENT OF SUN CITY, FLORIDA

Jennifer Hardin
Post Graduate Research Fellow, Center for Urban Transportation Research (CUTR), University of South Florida

Many retirement communities are located outside of metropolitan areas. Their locations complicate the issue of providing public transportation service to their residents. Sun City Center is an unincorporated retirement community 16 miles outside of Tampa, Florida. A community-based needs assessment was conducted to provide the Hillsborough Area Regional Transit Authority (HARTline) and the community of Sun City Center with information regarding the perceived public transportation needs that exist in the retirement community.

The three objectives of the community-based needs assessment were: (1) to assess the perceived transportation needs of the local residents; (2) to facilitate greater communication and coordination among HARTline, social service agencies, and local residents: and (3) to create a map showing primary traffic generators and attractors, housing centers, and existing pubic transportation routes.

Community-based needs assessments are conducted to obtain current data about the community, the people within it, and their needs. Thus, the methods used in the study concentrated on citizen input. Participant observation was

conducted in the community in order to observe day-to-day activity. Key informants were interviewed to elicit insight into how the various organizations perceive community transportation issues and needs. Focus groups were conducted with residents to examine personal transportation needs and perceived community needs. Geographic information system (GIS) technology was used to map major traffic generators and attractors, housing locations, and bus routing information.

The results obtained in this study indicate that a need exists for more public transportation services and/or expansion of existing service in the area. The data indicate that the majority of travel need is local. Funding has been secured, and a community bus program will begin in March 1996.

Hardin, J.A., A Community-Based Public Transportation Needs Assessment for Sun City Center, Florida: Final Report, Internship Project, Department of Anthropology, University of South Florida, Tampa, Florida (1994).

INVOLVING THE PUBLIC IN A LOCAL COORDINATING BOARD WORKSHOP

Rosemary G. Mathias
Paratransit Program Manager, Center for Urban Transportation Research (CUTR), University of South Florida

In April 1995, the Center for Urban Transportation Research (CUTR) conducted a Trip Priorities & Eligibility Workshop for the Brevard County (Florida) Local Coordinating Board (LCB). The purpose of the workshop was to provide an interactive forum for LCB members to discuss trip priority and eligibility issues with the goal of deciding whether to recommend that Space Coast Area Transit (SCAT) implement more formal client eligibility and priority-setting procedures.

The workshop was conducted as a public meeting, designed to allow participation by both the LCB members and the audience observers. This approach was especially appropriate given the topic and the six-hour duration of the workshop. Accommodations were made to enable the audience members to eat lunch with the LCB members, allowing them to be fully involved in the day's activities. Twelve of the LCB members participated; 18 audience members also participated, primarily representing agencies whose clients use specialized transportation services.

The introduction to the workshop was used to introduce the topics of eligibility and trip priorities in general. It included a description of the issue of unmet demand for services; that is, the fact that demand exceeds supply and that the purpose of the workshop was to determine whether additional steps were needed to ensure that trip priority and eligibility determination practices in Brevard County are appropriate for the local conditions.

The bulk of the workshop was a nominal group exercise, designed to elicit ideas about who needs specialized transportation services most in Brevard County. For logistical purposes, the group was split into two. Rosemary Mathias facilitated the LCB interaction; Jennifer Hardin facilitated the audience discussion. To start, each group was asked to write down their individual responses to the question: "What are the characteristics of people in Brevard County who most need TD (transportation disadvantaged) transportation?"

Each person was given approximately 10 minutes to write down his/her response. Each group independently recorded all of the answers on posters, which were posted on the wall. After the responses were recorded, participants were allowed to ask for clarification on any comments that were unclear.

Next, each group was asked to pick the top five most important answers from the respective group list (i.e., LCB members ranked their top five responses using the LCB list and audience members ranked their top five responses using the audience list).

Following a lunch break, the participants were shown the initial rankings from both groups and were asked to rank their top three priorities based on the combined lists. The results of the rankings were tallied while the LCB and audience received an update on the current status of the program, provided by the Transit Services Director.

The purpose of the nominal group process was to illustrate the complexity of the issue of determining who is most important to serve when resources are limited. Further, the workshop provided a forum for structured discussion, which allowed each person an opportunity to express his or her opinion.

The workshop was viewed as unique because the audience and LCB members participated in independent workshops, in the same room, which were then merged for the final nominal group technique ranking exercise. Of particular interest is the fact that one of the audience trip priorities, which never appeared on the LCB members' list, became one of the LCB members' top three priorities.

Mathias, R.G. and Hardin, J.A., Brevard County Local Coordinating Board Trip Priorities & Eligibility Workshop, Center for Urban Transportation Research, University of South Florida, Tampa (1995).

Concurrent Session #1
4. An Update on Rural Transportation Cooperative Research Program Topics

Paratransit Software - Hard Choices

Roy Lave
SYSTAN, Inc.

(Summary provided by Rosemary Mathias)

Paratransit Software - Hard Choices

Roy Lave
President, SYSTAN, Inc.

Two professional development workshops were devoted to the difficult task of selecting paratransit software. The workshops were based on Project A-6: Software Requirements for Demand-Responsive Transit, conducted by Logitran and SYSTAN Inc., funded by the Transit Cooperative Research Program (TCRP).

The research is intended to advise providers of demand-responsive transit (DRT) services about computer software and other technology appropriate for DRT applications and to assist software vendors in understanding the market for DRT software and technologies. The project will include an implementation handbook intended to guide DRT providers through the processes of selection, acquisition and implementation of software for DRT operations and administration. The research also documents the needs of DRT providers and translates these needs to the requirements for the development of software.

An outline of the interactive workshops follows.

Paratransit Software--Hard Choices: TRB Rural Mobility

1- Opening
2- Ground Rules
3- Schedule
4- Who's Here

+ Who is in Survey
+Sample and Sampling
- Service Patterns
- Eligibility
- Population
- Fleet
- Reserve Timing
+ Density
- Service Area
- Patrons

+ Reasons Given for Buying Paratransit Software

+ Hardware
- Computer Hardware Used and Planned
- Future Use of Computers for DRT
+ Not Necessarily PC
+ Software Primer
+ Types of Software
- System Software--computer's spouse
- Utilities--housekeeper
+ Generic Applications
- Word processor
- Database
- Spreadsheets
- Specialized (Specialty) Applications

+ Paratransit and Software
+ Functions for Providing Paratransit
- Eligibility Determination--is rider eligible
- Trip Reservation (order taking)--record rider request
- Service Scheduling--give rider a pick-up time
- Vehicle Dispatching--give trips & times to vehicle
- Vehicle Routing--give street routing to vehicle
- Management Reporting
- Accounting

+ History of Paratransit Software

+ Levels of Automation
- Computer Assisted, Fully Automatic (override?)
+ "Bad Drivers Do As They Are Told, Good Drivers Fix The Schedule"

+ Use of Software Types
- Computerization of Data Files
- DRT Function by Software Type
- Fleet Size and Software Use

+ Specialized, Paratransit Software Market
+ Characteristics of Paratransit Software Market
+ Annual sales are small--very small
+ Firms are small
- Consumers are severely financially challenged
- Customers make infrequent investments in technology
+ Improvements will not be rapid
- Prices will not fall
- Vendors tend to offer on one computer platform

+What is Available in Software
+ Companies and Packages
+ Source: Advance Public Transportation Systems: The State of the Art, Update '94 (DOT-94-09, TSC, Cambridge, Mass., January '94
+ Characteristics of Paratransit Software
- Functions and Features
- Bug Free

- Price
- Speed
+ User Friendly
- Compatible
+ Robust

+Features
+ Ten Most Used Software Features

+ Quality of Service
- Quality of Software by Function
- Evaluation of Software Characteristics

+ Future DRT Software
- Enhancements in Future DRT Operating Software
- Enhancements in Future DRT Management Software

+ Vendors
+ Characteristics of Vendors
+ Strength & stability
+ Support
+ Training
- Evaluation of Software Companies
- Future Improvements in DRT Vendors

+ Do You Need Paratransit Software?
- No Theory, Just Practice
+ Factors Affecting Need for Software
- Number of vehicles
- Number of Riders
- Ridership restrictions
+ Immediate or advanced reservations (prescheduled)
- Service area size and barriers
- Skills of staff
+ Peer Groupings
+ Automation Required for Maximum Productivity (NTI)
+ Cost
- Generic
+ Specialized package
+ Hardware
+ Internal
- Source
+ How Do You Tell What it Might do for You?

+ Impacts of Software Use
+ Impact on Organization
- Productivity
- Capacity
- Quality of service
- Staff size
- Staff skill level
- Job satisfaction
- Ease of management
- Impact of Software on Service
- Impact of Software Use on Staff

+ Acquisition
- Not Shrink Wrapped
+ Principles of Procurement
+ Steps in Buying Software

+ Implementation
+ Staff Issues
+ Budget Impact
+ Start Up
+ Start slow
- Parallel operations
+ Allow time for parameter setting

+ Complementary Technologies
+ Complementary Technologies
- Digital data communications
- Mobile data terminals (MDTs)/mobile computers
- Automatic vehicle location (AVL) devices
- Mapping software/geographic information software (GIS)
- Card-based data storage and transfer technologies
- Menu driven telephone/'caller ID
- Technology Used and Planned
- Future Significance of Technologies in DRT

- Questions & Discussion

Concurrent Session #1
6. Planning, Designing, and Constructing a Facility that Meets Your Needs

Planning a Facility: Do's and Don't's

Linda Wilson
Community Transportation Consultant

I have been, for the past fifteen years, Executive Director of JAUNT, inc. In Charlottesville, Va. JAUNT was created in 1975 and was originally a 501(c)(3) nonprofit but became a public service corporation in 1982. When I became Director in 1980 JAUNT had just completed a Section 147 grant, had applied for Section 18 funds, and was providing primarily coordinated human service transportation. At that time (and until December of 1992) JAUNT was housed in a two story former family dwelling with a somewhat larger than average parking area. The system budget was about $500,000.00 annually, there were nine vehicles (standard vans) and about 21 employees. At that time all maintenance was contracted out but within a couple of years we had a staff mechanic who literally worked under a shade tree in the parking lot. The building was totally inaccessible to persons with disabilities.

In 1982 we added an assistant director to the staff. She was a planner, and her main assignment was to find us an adequate facility. As will soon be evident, this process took ten years. She began searching out all options: sharing a building with other community agencies, locating a garage at another location, renting a former automobile sales and maintenance facility. All options were unworkable. We had no money to buy or to renovate and certainly not to build. Our rent was cheap (By 1992 it was still only $1,000.00 a month). Upkeep wasn't great but it was provided by our landlord.

Over the ten years that we searched for a facility, many transit studies were conducted in the area. Charlottesville became an urbanized area as a result of the 1980 census. There was a small city fixed route transit system and the University of Virginia had a transit system. Studies addressed the merger or sharing of the systems. A study conducted in the late 1980's outlined the plan for a multi-modal facility based at the Amtrak station. JAUNT would have been housed there. We delayed our facility relocation as we waited out all these studies, but each one was abandoned without implementation. In the meantime, JAUNT was growing. By 1992 we had increased from 9 to 58 vehicles, our staff had grown to 90 individuals, we had a budget approaching three million dollars. We had become a regional transit system serving all area human service agencies, rural counties, providing the city's comparable ADA paratransit and providing the area's regional ridesharing system. Our little building was bursting at the seams.

By 1990 we were desperate to move and began to look for a facility in earnest. We had no funds to build. We could apply for a FTA Section 3 grant, but had to have funds up-front for construction. We advertized to all area builders, contractors and Realtors that we needed a facility and would entertain any suggestions for assistance. We received several, but the one that we chose came from two civic minded brothers who are builder/developers. They were creating a small industrial development complex and had a large lot available. They would build a facility to suit us, then rent it to us with a ten year lease and option to buy. The downside of this offer was that our rent would increase from $10,000.00 a year to about $65,000.00. We approached local governments, who would have to increase operating funds, and assured them that we would immediately apply for the Section 3 grant and would also apply for state funds. We soon learned the reality of earmarking. I had spoken with then FTA Administrator Brian Clymer who had told me he might be able to fund us out of his pot of discretionary money. He wanted to see more Section 3 dollars going to small and rural systems. By the time our grant reached FTA a new grant year was in effect and all the Section 3 money was earmarked leaving nothing for the Administrator.

Construction began in April of 1992 and proceeded without any major disasters. We actually moved into the facility on December 7, 1992. On December 18, ten days after our move, we were notified by our FTA regional office that they had found our requested $600,000.00 in deobligated funds and we could proceed to buy the building. That process took six months and we actually became the proud owners in June, 1993.

The major Don't I would offer is **Don't build for your present needs. Do build for growth.** We had been urged by FTA to build for 25 year growth. We didn't, because to do so would have cost us much greater rent in the event that we did not receive Section 3 funding. We thought we were building for growth in the immediate future, but had outgrown the building in only two years. We bought an adjacent parcel of land for additional parking but have no money to develop it. Also, we want to add on a wing. This will cost about $500,000.00, and there are no capital funds available at present. Furthermore, there is yet another Transportation Development Plan for the area that is, as before, urging the merger of the area's transit systems.

The new facility is still wonderful. It has roomy accessible offices, a conference room (that is not large enough!), large rooms for dispatch and data entry (that are already filled!), and a three-bay garage with two lifts and plenty of room for JAUNT's two mechanics.

What would we do differently? We would definitely think BIGGER. We would design offices with more flexibility (more office space with movable dividers). The heating and cooling system should allow for individual controls in each office (Oh, the fights we have had over the thermostat!) There should have been a bigger driver lounge with some lockers and a shower.

With the aid of our builder, we designed a long-term maintenance plan for the building so we could fold this in to each year's operating budget. We also did not do a feasibility plan as such. This would have helped us look ahead and could have prevented the shortsightedness of building too small. The positive aspect of having a building purpose built to rent is that we did not have to jump through all the federal hoops required when building with grant dollars. By the time we purchased the facility it was an existing building. We made certain it met all local codes and was environmentally acceptable. In these times of tight money, this may be a way for small systems to go. This is certainly a cooperative project between private enterprise and the public provider and will get a transit system into a facility when there is no construction money available.

Concurrent Session #2
1. Update on Section 18i - The Intercity Bus Policy

Panel Discussion

Fred Favel
KFH Group, Inc.

Mary Martha Churchman
Federal Transit Administration

Charles Zelle
Jefferson Lines

Twelfth National Conference
Rural and Intercity Bus Transportation
October 22-25, 1995, Des Moines, Iowa
Section 18(I)--Rural Intercity Bus Program Issues

Fred Fravel -- KFH Group, Incorporated

FROM THE STATE PROGRAM PERSPECTIVE

1) **A Perception by State DOT's that there is no need for this program, or that it is less significant than other rural transit needs:**

   a. **Lack of public outcry about rural intercity service.** There is a lack of public outcry about the loss of rural intercity bus service (note that regulatory reform has been in place for a decade, and that the forum for public concern has essentially disappeared with the pre-emption of state regulation of entry, exit and fares)

   b. **Rural transit needs often exceed available funding.** There is a high need for funding by the rural public transit operators, who make it known most apparently by applying for funding that cannot be provided, but also through associations, meetings and daily contact with the states. Other human service constituencies relying on rural public transit also make this known.

   c. **Other trip needs may have higher priorities.** There is evidence that the highest priority trip needs of the rural poor include access to health care and basic social services, many of which are provided locally or regionally. Primary priority long-distance needs are usually medical, and intercity bus schedules and services often do not provide this service effectively (require overnight stays, access to/from the bus station, etc.)

   d. **Perceived lack of private intercity carrier interest.** There has been a lack of interest or activity on the part of the private intercity bus industry,

2) **Institutional problems make it difficult to implement Section 18(I) without legislation and/or major program changes:**

   a. **State constitutional prohibitions on providing funds to private for-profit firms.** If an intercity service is regional or multi-county in nature, there may be no local entity to provide the local match, or to act as a pass-through for state funding for the local match, assuming it is available.

b. **State concerns about 13(c).** Is the proposed project covered by the Section 13© warranty? Or is the state prohibited from taking this on for a private for-profit firm? Who would be covered if the proposed intercity service is statewide? Many states do not feel that there is clear direction on this issue, and so cite it as a reason for going slow or certifying.

c. **No state programs that fit.** If there are no local or regional entities that can provide the local match, and the carriers do not provide it, there are often no programs that provide a state funding source that could provide the local operating match (carriers are more likely to provide the capital match).

3. **Many states feel that the private carriers are unstable in their policies, and financially. This, combined with high levels of state staff work to get private carriers to understand and participate in the applications process and the record-keeping, lead many state programs to avoid private carrier programs.**

a. **Some major national carriers change policies and positions faster than programs can be implemented.** Developing a program to develop facilities or provide capital may take years, and if carriers are interested, back away, are interested again, and then back off--state and governments are less likely to involve them.

b. **Small local or regional carriers may be interested, but not have the financial strength needed to survive until programs can begin.** If a rural service is vulnerable, a small carrier may need funding <u>now</u> to maintain service or even stay in business--and the Section 18 process often has lead times that are well beyond the planning horizon of these small operators.

FROM THE PRIVATE CARRIER PERSPECTIVE

1) **Many private carriers are generally wary of accepting public funding, because of concerns about hidden strings, intrusive audits, and the risk of starting or maintaining some service when funding may be short-lived.** Even if the current program requirements are known and acceptable, a private carrier would have to be concerned about unknown future requirements.

2) **Awareness of the programs is low, and private carriers do not have accurate information about the requirements and applications process.** Even if carriers have the full information package, if it presented without some outreach and support, carriers will see it as too burdensome for the likely reward and so not apply (see the Virginia Section 18(I) application).

3) **Specific Program Problems Include:**

   a. **Section 13(c).** While it should not be a problem, in the context of past labor problems in the industry it could be perceived as an issue. Also, if the states are uneasy or unsure about how it applies, they cannot explain it to private carriers.

   b. **Local Operating Match.** To a private carrier, if there is no entity to supply the other 50 percent of the net deficit, operating assistance is not very attractive because the service is still losing money (and now there is no regulatory structure forcing the carrier to cross-subsidize the other half, and package express revenues are not enough to over the other half). Intercity routes serving many jurisdictions are unlikely to get local government funding--and many states are unwilling or unable to take on the role of the local applicant for such services (though there is more interest in this role for Amtrak support).

   c. **ADA.** As the DOT has not issued an NPRM to implement ADA for private operators of over-the-road coaches, many private carriers are unsure whether accessibility requirements met under or with Section 18(I) will be the same as for their private services.

   d. **Loss of Operating Flexibility.** If bus capital is acquired under Section 18(I), it is likely to be restricted to use in the state that provided the funding. Few regional carriers operate services on a state-by-state basis, and so need to put the vehicles into pools that include use in other states.

4. **Private intercity operators also have priorities, and if public funds are available many would rather see them spent on high-quality intermodal terminals in larger cities, or on intercity services by local rural public transit operators that feed the intercity bus routes.** More bus passengers would be attracted, the image of the industry improved, and the benefits would be greater (more current passengers would benefit) if the focus was on terminals in urbanized areas (particularly the major markets). ISTEA funding can be used for such purposes. If rural intercity funding is available, some would rather not take it themselves, but see it go to rural operators to feed them.

CONCLUSIONS

Given all of the above, and the funding levels that are likely over the next few years, can and should this program continue? Should it be redesigned to address some of these issues? Usage of the program has been hampered by these problems, whether actual or perceived, but also by timing and the need to make some basic program changes and get modal interests to communicate. Timing has been a factor because the largest carrier, Greyhound, has been through management changes during the period since ISTEA. At the same time, many states were unable to find a way to use the funding, and so have recently begun certifying for earlier years to avoid losing the funds.

As the states have the option of certifying and using the funds for other Section 18 purposes, the program may be serving the function of at least requiring the states to ask questions about intercity services generally, and rural issues in particular:

-- compared to all other rural transit needs, is assistance need for rural intercity connections? Or,

-- in light of the continued vulnerability of rural intercity services, is assistance needed? Or,

-- should private carriers facing accessibility requirements receive assistance to become part an overall accessible surface system? Or, more broadly,

-- should facilities and operations of intercity services receive assistance to become part of the overall intermodal passenger transportation system (including rail passenger service and airport ground transportation).

Reauthorization offers the opportunity to address the program problems, and perhaps develop a policy that would address the more general questions of the best way to improve transportation linkages from rural areas to regional centers to major metropolitan areas.

Notes for Intercity Bus Presentation - Iowa rural conference
Mary Martha Churchman
Nonurbanized Formula Programs Manager, Federal Transit Administration

Funding

FY 95 Section 5311(f) obligations = $16.9 million ($7.4 of that in reserve). 15% of the FY 95 apportionment = $19.9

For expected FY 96 apportionments - 15% = $16,672,626

Problems impeding implementation

Local share
13(c) - real or perceived barrier
Lack of response/interest from intercity operators
Limited resource - rural transit higher priority
Lack of experience/ knowledge - natural start-up time for new initiative (cf. RTAP, carryover concerns at beginning of S. 18 program
Inertia
Service is expensive and difficult to provide - there are good reasons why the major operators dropped out of the rural market
Change is hard

Solutions

Legislative change - not in FY 96

Certification - FTA may make it easier, Governor's designee, or maybe even as one of annual certs. 23 states to date have certified.

Win/Win - focus on meeting rural mobility needs. How does the need for intercity travel fit into the total rural mobility picture. How can needs best be met? What combination of intercity and local service best fills those needs. Who can best provide the service - what combination of private operators and public transit agencies and human service transportation?

Imagination - new solutions to new problems. Given the limited financial resource, how can it best be used to support intercity service? What do operators need?

Focus on joint use terminal facilities may be appropriate - multi-modal, including airport connections if possible.

Feeder services/ connections.

Refinements of existing service - for example demo funds to make trip to regional medical center which now only happens when there is a Medicaid paid passenger (others then can go on space available basis) a regularly schedule service. (18(i) used to support trips which would otherwise be cancelled)

Projects as listed in FY 1995 Program of Projects

Alaska - Alaska Direc Bus Line - Project Administration, planning, marketing

Arizona - operating assistance - Navajo [tribe] and Pima County. Both S. 18 providers.

Florida - Operating assistance and 11 vans for service expansion to implement connecting feeder services demonstration project.(Good Wheels - Private nonprofit)
Also construction of intermodal terminal in downtown Tampa for Hillsborough Area Regional Transit (HART), a private nonprofit.

Idaho- operating assistance and project administration for five projects:
North Idaho Community Express, Inc (NICE) - rural north Idaho to/from Coeur D'Alene
Pocatello Urban Transit (PUT) - to/from Pocatello and Burley
Trans IV Buses - rural southwest Idaho to/from Twin Falls
CART, Inc. (Community and Rural Transportation) - rural southeast Idaho to/from Idaho Falls
Moscow/Latah County Public Transit (MPT) - North Central Idaho to/from Moscow

Indiana - Operating and capital (2 small buses for expansion) for Kosclusko County; planning and marketing for Marion; Capital (ADA bus shelters) and planning and marketing for Monroe; operating, planning and marketing for MACOG; planning and marketing for Indiana Association of Area Agencies on Aging.

Kansas - Occupational Center of Central Kansas - operating assistance; remainder of operating and capial assistance administered by state.

Kentucky -
Fivco Area Development District (private nonprofit) - operating
Rural Technical Enterprises, Inc. - operating and capital (transit main renovation)
Sandy Valley Transportation - operating
Bluegrass Community Action Agency (private nonprofit) - Operating
LKLP Community Action Services - opertating
Fulton County Transit Authority - Operating and capital (1 minivan w/ ramp, RV cutaway w/lift, radio equipment

Maine - Operating assistance for three recipients:
John T. Cyr & Sons, Inc.
West's Transportation, Inc.
Biddeford, Saco, Old Orcchard Beach Transit Committee

Michigan - purchase and install passenger amenities - including bus washing machine

Minnesota - planning: "Develop an intercity bus program to meet federal requirements and meet the intercity bus needs of rural Minnesota". (Minnesota has 82 rural providers in the program of projects for regular rural public transportation!!)

Missouri - Put funds in reserve - the DOT is currently developing a methodology to allocate the funds.

North Dakota -
D&J Bus Line Co. (Intercity bus line) - operating assistance
New Town Bus Line Co. - New Town to Minot - new bus, lift, and operating
New Town Bus Line Co. - Bismarck to Minot - operating

Nebraska - Governor signed certification, but state used small amount of state administration funds for "administration, planning and technical assistance activities relating to" the intercity bus program.

New Hampshire -
Advance Transit, Inc. Lebanon, NH - operating and admin
Community Transportation Services, Inc. Claremont, NH - administration
Lake Region Commmunity Services Council, Inc. Laconia, NH - operating
Tri-County Community Action Program, Inc. Berlin NH - admin
Concord Trailways - Concord NH - capital ($75,000)

Nevada -
Eastern Nevada (Elko, White Pine, Lincoln, Eureka, Lander, Churchill Counties) - operating and capital
Pyramid Lake Paiutes [tribe] (Washoe, Storey, Lyon, Churchill Counties) - capital
Western Nevada (Nye, Mineral, Esmeralda, Lyon, Churchill Counties - admin & operating

New York - purchase and install passenger amenities; rehab bus terminal; rehab maintenance facility

Oregon - Grant County - operating and admin; Oregon DOT - intercity bus marketing/planning; administration; Tilamook County - operating

Pennsylvania - operating assistance for: Capitol Trailways, Fullington Autobus, Lincoln Coach, and Susquehanna Trails

Rhode Island - State has a formal written agreement with Bonanza Bus Lines stating that they have explored various funding options and that both agree the intercity bus needs of the state are met by Bonanza without subsidy.

South Dakota - user side subsidy program for riders using motor coach lines operating in SD

SECTION 18(i) - GOVERNORS CERTIFICATIONS Revised 10/12/95

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Under Section 18(i), the states do not have to program the required 15% of their Section 18 apportionment for intercity bus transportation if the Governor certifies that the intercity bus transportation needs of the state are adequately met. Twenty-three states, and Puerto Rico and Guam, have so certified for one or more years since Section 18(i) began in FY 92.

GOVERNOR'S CERTIFICATIONS RECEIVED IN FY 1995

Tennessee - certification signed 10/27/94 for FY 93
Connecticut - certification signed 11/29/94 for FY 95
West Virginia - certification signed 12/29/94 for FY 95
Vermont - certification signed 1/31/95 for FY 95
North Carolina - certification signed 2/22/95 for FY 95
Arkansas - partial certification signed 3/21/95 for FY 95 ($100K for 18i)
Indiana - certification signed 3/27/95 for FY 95 (Public process noted)
Louisiana - certification signed 3/31/95 for FY 95 (Public process noted)
South Carolina - Certification signed 4/7/95 for FY 95
Guam - certification signed 5/4/95 for FY 95 (Not strictly necesarry for Guam to certify)
Nebraska - partial certification signed 5/22/95 for FY 95 (small amount to be used)
Kansas - partial certification signed 6/26/95 for FY 94 or 95(?)
Rhode Island - certification signed by Transp. Director 7/28/95 for FY 93, FY 94, and FY 95
Colorado - certification signed 8/2/95 for FY 95
Hawaii - certification signed 6/19/95 for FY 95
Oklahoma - certification signed 5 /25/95 for FY 95
Virginia - certified with annual certifications
Maryland - certified with annual certifications

GOVERNOR'S CERTIFICATIONS RECEIVED IN FY 1994

Colorado - partial certification signed 1/14/94 for FY 92 and FY 93 [exemplary planning process]
Vermont - signed 11/16/93 for FY 94
New Jersey - signed 11/19/93 for FY 92 and FY 93
Louisiana - signed 12/8/93 for FY 92, FY 93, and FY 94
Connecticut - signed 1/10/94 for FY 94
Kansas - partial certification signed 2/4/94 for FY 92 and FY 93. [FY 94 will be used for 18(i)]
Missouri - Partial certification signed 2/14/94 for FY 94
Ohio - partial certification signed 3/16/94 for FY 92 and FY 93
West Virginia - certification signed 3/21/94 for FY 93 and FY 94
Maryland - certification signed 4/4/94 for FY 94
Arkansas - partial certification signed 4/14/94 for FY 93 and FY 94
Virginia - signed 4/28/94 for FY 92, FY 93, and FY 94
Hawaii - signed 6/1/94 for FY 94
North Carolina - signed 6/16/94 for FY 93 and FY 94 (will fund some intercity as in past)

Maine - partial certification signed 6/16/94 for FY 94
Alabama - certification signed 8/26/94 for FY 92, FY 93, and FY 94 (will do planning study)
Oklahoma - certification signed 9/27/94 for FY 93 and FY 94.
South Carolina - certification signed 9/27/94 for FY 92, FY 93, and FY 94.
Puerto Rico - certification signed 9/30/94 for FY 92

(States certifying for prior years in which funds were obligated and reserved, or held back to obligate later, may reprogram those funds for other Section 18 projects after certifying.)

STATES WHICH CERTIFIED BEFORE FY 1994:

Texas (FY 92), Maryland (FY 92 and FY 93), Missouri (FY 92 and FY 93), West Virginia (FY 92), Vermont (FY 93)

DATE OF STATE INTERCITY BUS CERTIFICATIONS

STATE	FY 1992	FY 1993	FY 1994	FY 1995
ALABAMA	8/26/94	8/26/94	8/26/94	
ALASKA				
ARIZONA				
ARKANSAS		4/14/94(%)	4/14/94(%)	3/21/95(%)
CALIFORNIA				
COLORADO	1/14/94(%)	1/14/94(%)		8/2/95
CONNECTICUT			1/10/94	11/29/94
DELAWARE				
FLORIDA				
GEORGIA				
HAWAII			6/1/94	6/19/95
IDAHO				
ILLINOIS				
INDIANA				3/27/95
IOWA				
KANSAS	2/4/94(%)	2/4/94(%)	6/26/95 (%)	6/26/95(%)
KENTUCKY				
LOUISIANA	12/9/93	12/8/93	12/8/93	3/31/95
MAINE			6/16/94(%)	
MARYLAND	4/28/92	3/21/93	4/4/94	Annual cert.
MASSACHUSETTS				
MICHIGAN				
MINNESOTA				
MISSISSIPPI				
MISSOURI	6/9/92	6/22/93	2/14/94(%)	
MONTANA				
NEBRASKA				5/22/95
NEVADA				
NEW HAMPSHIRE				
NEW JERSEY	11/19/93	11/19/93		
NEW MEXICO				
NEW YORK				

NORTH CAROLINA		6/16/94	6/16/94	2/22/95
NORTH DAKOTA				
OHIO	3/16/94(%)	3/16/94		
OKLAHOMA		9/27/94	9/27/94	5//25/95
OREGON				
PENNSYLVANIA				
PUERTO RICO	9/30/94			
RHODE ISLAND		7/28/95	7/28/95	7/28/95
SOUTH CAROLINA	9/27/94	9/27/94	9/27/94	4/7/95
SOUTH DAKOTA				
TENNESSEE		10/27/94		
TEXAS	4/6/92			
UTAH				
VERMONT		10/30/92	11/16/93	1/31/95
VIRGINIA	4/28/94	4/28/94	4/28/94	Annual Cert.
WASHINGTON				
WEST VIRGINIA	2/10/93	3/21/94	3/21/94	12/29/94
WISCONSIN				
WYOMING				
TOTAL NUMBER	13	17	16	16 (+Guam)

(%) FOLLOWING DATE INDICATES THAT CERTIFICATION WAS FOR SOME PART OF, BUT NOT ALL, OF THE YEAR'S INTERCITY BUS REQUIREMENT.

30-Oct-95

INTERCITY BUS PROJECTS - FY 1996 SECTION 18 OBLIGATIONS BY CATEGORY (Preliminary)

STATE	CAPITAL	OPERATING	PLANNING	PROJ ADMIN	STATE ADMIN	PROGRAM RESERVE	TOTAL	NOTES AND COMMENTS	FY 1995 APPORTIONMENT
ARKANSAS	0	0	0	0	0	100,000	100,000	PARTIAL GOVERNOR'S CERTIFICATION SIGNED 3/21/95 FOR BALANCE	2,535,133
LOUISIANA	0	0	0	0	0	0	0	GOVERNOR'S CERTIFICATION SIGNED 3/31/95	2,870,379
NEW MEXICO	19,600	148,485	0	95,632	0	0	263,717	1 REPLMT VAN; COMMUN. SYST - 3 RECIPIENTS INCL. TRIBE	1,246,850
OKLAHOMA	0	0	0	0	0	0	0	GOVERNOR'S CERTIFICATION SIGNED 5/25/95	2,548,105
TEXAS	0	0	0	0	0	1,213,511	1,213,511	TX IS WORKING ON PLAN WITH PRIV. OPERATORS TO IMPR. FACIL.	8,090,072
REGION 6 TOTAL	19,600	148,485	0	95,632	0	1,313,511	1,577,228		
IOWA	0	396,437	0	0	0	0	396,437		2,642,915
KANSAS	160,000	113,838	0	0	0	41,516	315,354	4 VANS FOR SERV. EXPANS./ PARTIAL GOVERNOR'S CERT. 6/26/95	2,102,355
MISSOURI	0	0	0	0	0	0	0		3,363,743
NEBRASKA	0	0	0	0	17,482	0	17,482	GOVERNOR'S CERTIFICATION SIGNED 5/22/95; ST. ADM. FOR PLNG, TA	1,283,212
REGION 7 TOTAL	160,000	510,275	0	0	17,482	41,516	729,273		
ARIZONA	0	218,144	0	0	0	0	218,144		1,454,287
COLORADO	0	0	0	0	0	0	0	GOVERNOR'S CERTIFICATION SIGNED 8/2/95	1,320,770
MONTANA	0	0	0	0	0	127,567	127,567		850,444
NEVADA	95,000	135,000	0	81,108	0	0	311,108	3 RECIP (ONE TRIBE), 2 NEW ACCESIBLE VANS & COMMUN. EQUIP.	418,949
NORTH DAKOTA	46,750	47,600	0	0	0	0	94,350	2 PRIV. OPERATORS; 1 <30' REPLACEMENT BUS & RADIO	626,941
SOUTH DAKOTA	0	114,995	0	0	0	0	114,995	USER SIDE SUBSIDY PROGRAM FOR RIDERS USING PRIV. COACH LINES	766,630
UTAH	0	0	87,173	0	0	0	87,173	SHORT RANGE PLANNING	581,148
WYOMING	0	55,026	18,344	0	0	0	73,372	PLANNING AND MARKETING	489,143
REGION 8 TOTAL	141,750	570,767	105,517	81,108	0	127,567	1,026,709		
AMERICAN SAMOA	0	0	0	0	0	0	0	INSULAR AREA - NOT REQUIRED	67,399
CALIFORNIA	0	0	0	0	0	928,116	928,116		6,187,434
GUAM	0	0	0	0	0	0	0	INSULAR AREA - NOT REQUIRED	191,870
HAWAII	0	0	0	0	0	0	0	GOVERNOR'S CERTIFICATION SIGNED 6/19/95	520,369
NORTHERN MARIANAS	0	0	0	0	0	0	0	INSULAR AREA - NOT REQUIRED	62,460
REGION 9 TOTAL	0	0	0	0	0	928,116	928,116		
ALASKA	0	0	70,931	0	0	0	70,931	MARKETING	472,874
IDAHO	0	103,350	0	54,124	0	0	157,474	OPERATING ASSISTANCE FOR	1,049,829
OREGON	124,000	177,150	40,000	0	109,200	244,100	644,450	FY 94 AND FY 95 APPORTIONMENTS. 2 COUNTIES AND DO	2,049,459
WASHINGTON	0	357,066	0	0	0	0	357,066		2,390,442
REGION 10 TOTAL	124,000	587,566	110,931	54,124	109,200	244,100	1,229,921		
TOTAL	2,585,766	4,170,859	2,246,805	342,528	126,682	7,442,860	16,915,522	FIFTEEN PERCENT OF TOTAL FY 95 APPORTIONMENTS =$19,912,942	132,752,946

PRESENTATION BEFORE THE NATIONAL CONFERENCE ON RURAL PUBLIC AND INTERCITY BUS TRANSPORTATION OCTOBER 23, 1995

CHARLES A. ZELLE - PRESIDENT , JEFFERSON LINES

Long term trends and recent structural changes within the private intercity bus industry signify the need and opportunity for integrated relationships with local rural transit systems. Today's lower passenger yields will require higher load factors and improved cost efficiencies that can be achieved in part through cooperative networks with other private, public and non-profit rural transportation providers.

The gradual decline of rural intercity bus service during the past several decades comes as no surprise. Less widely known shifts in industry vision and strategy has resulted this year in a reversal of ridership decline, with an increase in passenger miles of as much as 15 % for major long line carriers. This ridership gain has been achieved primarily from reduced pricing in the form of every day lower standard fares. These lower yields, in turn, place greater pressure on cost controls and operating efficiencies.

Jefferson Lines has a long standing tradition of serving rural communities. The company was named after the Jefferson Highway, which in the early 1920's was a dirt and gravel road connecting many small towns along a north and south corridor in Minnesota and Iowa. Today, the company (Jefferson Partners L.P. d.b.a.: Jefferson Lines) route system is far larger, serving approximately 100 communities in nine states from Minnesota to Texas. Jefferson operates scheduled passenger and package express service as well as charters and tours. The regular route operations account for approximately 4.7 million miles annually. This level of service is operated with only 25 designated buses (not including several "shop" buses that rotate into the active fleet for maintenance purposes). Although the high number of miles per bus provide productive asset utilization required to keep costs low, the scheduling and routing of the comprehensive system sometimes compromises service advantages for certain rural communities.

In the past, Jefferson has embarked on several initiatives to learn more and develop closer ties with the rural communities it serves. The Community Awareness Program involves a local government, businesses, etc. in developing a greater understanding of the specific role Jefferson may offer a particular community.

One of Jefferson's most successful programs serves as a model for other communities throughout the company's system. Ft. Dodge, Iowa transit system (DART) operates connecting service to Jefferson buses on Interstate 35 at a truckstop known as the Boondocks. The operating costs of this service are offset through interline ticket revenue and commission revenue because DART acts as Jefferson's ticket agent in addition to being a connecting carrier. DART service is shown on all printed Jefferson schedules. Through Jefferson , DART has access to the entire intercity bus network (schedule information is included in Russell's Guide and the Greyhound Telephone Information Center) The mutual benefits of this arrangement are being explored in several rural regions along Jefferson routes The advantages for rural transit providers are evident in new revenue sources and increased ridership. Jefferson gains from closer connection with rural passengers (door to door service in many instances) and enhanced operating productivity , i.e.: fewer stops, less miles off the main route, and depot cost savings.

Jefferson management is participating in various state studies of rural intercity bus service initiated with 18(i) funding. The company does not seek operating or capital subsidy for its own unprofitable operations, but rather sees its role as an important partner in the development of broader rural transportation networks. Federal assistance should help states in developing this coordination through market analysis studies, marketing/awareness programs, intermodal terminal development, and regional feeder systems.

Given the broader economic trends and the likely decline in overall public funding, Jefferson and other private intercity bus companies are willing partners in the development of mutually beneficial and productive rural networks.

Concurrent Session #2
2. Ride Tracking

Robert Tanenhous
Information Management International, Inc.

RIDE TRACKING PROJECT UPDATE
AND ECONOMIC STUDIES OF ELECTRONIC CARD SYSTEMS FOR PUBLIC TRANSPORTATION[1]

Robert Tanenhaus
President, Information Management International, Inc.

ABSTRACT

The Ride Tracking System is an electronic card system for public transportation that automates trip tracking, fare processing and accounting. The system also can offer other intelligent transportation functions and can be used to control non-emergency trips that are subsidized by the U.S. Department of Health and Human Services (DHHS) and most states. The project is in the engineering and financing phase. Our latest economic studies suggest a cost-effective strategy for acquiring such an electronic card system.

PROJECT OVERVIEW

Functions

The Ride Tracking System is an electronic card system for public transportation that is being developed by Information Management International, Inc. (IMI). The system will automatically determine rider eligibility, track passenger trips, transfer data to accounting for billing and market analysis, and, optionally, process fares and provide intelligent transportation functions to improve service. The system also will handle multiple funding sources. The intelligent transportation functions offer advanced transportation information services in real-time, based on frequent transmission of information over wired and/or wireless networks. To define trip origins the system will determine vehicle location. To help manage the traffic the system will transmit vehicle and passenger data to managers, operating information to drivers and travel information to riders.

Assuming an existing vehicle-dispatch communication system and an existing scheduling and routing system, some other benefits can include

1. Better cost control, more fully automated accounting and faster government billing
2. Faster, automated fare processing and trip logging (demand responsives) and reduction or elimination of on-board cash
3. Vehicle and passenger data for advanced and real-time vehicle scheduling and routing, including advance notice of current passenger destinations

4. Travel information for passengers to schedule and route themselves in advance and real-time
5. Basis for automated reservation from home, office, kiosk, etc.
6. Point-of-sale communications between carrier and passenger
7. Processing of third-party support, e.g., funding by shopping centers and corporations enroute, business transportation tax, based on transportation's actual effect on sales, and government investment in reducing its non-emergency transportation subsidies (e.g., Medicaid)

In the last example, the system can help government clients maintain access to health and social services under the law, while significantly reducing the cost to federal and state governments. The system will automatically account for government-subsidized, non-emergency trips by able-bodied and disabled riders on demand-responsive (paratransits and taxis) and fixed-route (buses, trains and ferries) transportation to government-subsidized services in urban and rural areas, such as are provided by DHHS and its partner state agencies. IMI estimates that DHHS and the states could help save over $160 million net per year upon full implementation, i.e., over $110 million for DHHS and over $50 million for the states (e.g., in Medicaid; 1990 figures), primarily by enabling cost control of subsidies that accompany load sharing (i.e., shifting able passengers from demand-responsive to fixed-route modes), so that the savings are not consumed by continued rising cost.

Latest Features

Most recently, IMI added four new features to the system. The features are scalable vehicle location, light and font standards, group card and multiple languages. To serve the range of requirements for vehicle location, IMI delineated five vehicle location techniques, covering manual through automated approaches, as follows: manual zone, manual route stop, automatic stop cycle, automatic vehicle location with text and automatic vehicle location with map. To make the Ride Tracking System easier to use by able-bodied and impaired persons, IMI established lighting and font standards for visual and embossed characters on the cards and reader screens, based on recommended standards by advocacy and federal organizations. (These standards will serve during the interim until the Transportation Research Board completes the development of visual and auditory standards.) IMI also will introduce a group card, e.g., for attended groups, so that the attendant only has to use one card to count the entire group rather than run a card for each person through a reader. Moreover, IMI will add screen display and voice-out in various languages as an option, beginning with English and Spanish. A language preference can be added to a card, which will trigger a reader.

Other Participants

IMI has been conducting the project in cooperation with the following transportation and

disability advisors, transportation providers, cooperating manufacturers and federal and state government organizations:

Public Transportation Providers	Technology Organizations
Fresno County, CA	American Magnetics Corporation
Hillsborough County (Tampa), FL	Amphenol Corporation
State of Connecticut	AT&T Corporation
	Bell Atlantic Mobile
	Compaq Computer Corporation
	DataCard Corporation
	Gemplus Card International Corp.
	Micro Card Technologies, Inc.
	Polaroid Corporation

Public Transportation Advisors	Disability Advisors
American Public Transit Association	Children's National Medical Center
Community Transportation Assoc. of America	Columbia Lighthouse for the Blind
International Taxicab and Livery Association	Internet Disabilities Forum
National Easter Seals	Montgomery Co. (MD) Public Schools
National Transportation Consortium of States	National Rehabilitation Hospital
United Bus Owners of America	Paralyzed Veterans Association (FL)
Transportation experts	Disability experts in field test areas

Initially, the project was sponsored by the U.S. Department of Health and Human Services, which subsidizes many non-emergency, public transportation trips directly or through states and carriers. Subsequently, the project gained the interest of the U.S. Department of Transportation, which subsidizes public transportation. The project continues to be of interest to both departments through their Joint DHHS/DOT Coordinating Council on Human Services Transportation. The project also has been adopted by the National Transportation Consortium of States, a governors' group concerned with access to and delivery of human services.

SCALABILITY

Aiming Too High

Public transportation systems have different needs, technological capabilities and pocketbooks. One problem with some intelligent transportation systems is that they offer only the highest levels of automation, displacement of existing facilities, change in practices and cost. Such systems may focus on a small number of urban carriers who require maximum automation, may require most users to adopt more functionality than they need,

may require these users to abandon much of their present practices and facilities and can be expensive to achieve a workable configuration. Under these circumstances, some carriers may be reluctant to acquire intelligent transportation. If many systems "aim too high", intelligent transportation could face significant market resistance. In addition, if only independent systems serve the lower and middle levels of functionality which are not compatible with the higher level systems, carriers who have acquired one of the low-function systems would not be able to grow into a higher level system by adding to the original system, but would have to replace it entirely. The higher cost of replacement would discourage upgrading services. Therefore, what also is needed is scalability, i.e.,a functional architecture with an upgrade path. Such architectures can provide cost-effectively entry points for the market at various levels of functionality and a means of progressing up the functionality.

Magnetic Stripe vs. Smart Card Systems

The choice of technology depends on its fit with function and cost. The heart of intelligent transportation is electronic storage, processing and communications. These broad functions can be conducted by competing electronic media, such as magnetic stripes and microchips. It therefore is helpful to understand how the media are evolving in terms of functional capability and cost in order to know which media to select.

Using our proprietary model, we compared the cost of magnetic stripe and smart card (intelligent microchip) card systems, as applied to public transportation.[2] Until 1994, magnetic stripe card systems appeared to be more competitive for most applications, while intelligent chips could capture select markets based on high-level functions. However, our analysis suggests that, with magnetic stripes near the bottom of their cost and chips decreasing at 20-40% annually, by 1997 smart card systems could become the medium of choice for most new applications and magnetic stripe systems could narrow their advantage to lower-function uses. For example, a 20% decrease in the cost of magnetic stripe cards only reduces the cost of a magnetic stripe card system by less than 2%, whereas a 20% decrease in the cost of smart cards appears to reduce the cost of a smart card system by 15%.[3]

Ride Tracking System

The Ride Tracking System is designed for all public transportation systems. Therefore, the system is scalable in terms of the degree of automation, level of security and optional features, including intelligent transportation functions, in order to match the wide range of practices of transportation providers. For example, Ride Tracking's incremental approach to automated vehicle location (described above) provides a functional architecture with an upgrade path from low to high functionality. The vehicle location approaches range from cheaper manual operation to more expensive automatic operation. The approaches serve

periodic collection of trip data at the low end through frequent, real-time vehicle location and mapping at the high end. This upgradable architecture complements the varying degrees of automation in transportation systems and allows the gradual introduction of new functionality so that transportation systems can adopt Ride Tracking functions that fit their particular combinations of practices, facilities and budgets at any time. Therefore, the Ride Tracking System will use the electronic card media, e.g., magnetic stripe and microchip, most appropriate for the anticipated functions and economics of a transportation system, not only at acquisition of the system, but also during the course of its operation.

ECONOMICS

Costs

The following analysis illustrates why electronic card systems may be so costly and how to control the cost. Electronic card systems with only maximum functionality may be too automated and too costly for many carriers. The analysis also shows why a scalable system, like Ride Tracking with its functional modularity, helps solve this problem because it can be customized to a carrier's requirements and allows functions and degrees of automation to be acquired over time. The analysis of the cost of the system is based on two years of development and five years of implementation at 20% installation per year in fixed-route and demand-responsive modes. (This incremental approach understates the benefits, including government savings described below, for smaller markets, in which Ride Tracking can be installed in less time.) Data is drawn from the Section 15 Report by the U.S. Department of Transportation[4]. Costs include capital and operating. Capital costs cover research, development, systems integration, marketing, long-term financing, original equipment and replacement equipment. Operating costs include telecommunication services, equipment maintenance and repair and short-term component financing. After the period, the original capital cost should be paid off, only replacement, operating costs and short-term component financing should remain and the net return should increase substantially. (This more attractive situation is not analyzed here.) In exception to the long-term financing for the rest of the project, components will be financed short-term (maximum one year), since they will be sold well within a year as part of the system.

Scalability

A range of variations in the system were considered to cover the requirements of most carriers. The variations can be grouped in the following categories:

1. Market size, as symbolized by general population, up to 100%, or 249 million people
2. Electronic card type, i.e., magnetic stripe, in which data processing primarily resides in the reader or backup network, and smart, in which data processing

primarily occurs on the card
3. Functionality, i.e., minimum through maximum, the highest memory capacity and functionality for magnetic stripe card systems being lower than that for smart card systems

Analysis by market size illustrates economy of scale for fixed costs, such as research and development. Magnetic stripe card systems tend to be cheaper for lower memory capacity and functionality, smart card systems tend to be cheaper for higher memory capacity and functionality and the two systems overlap in the middle. However, as the cost of microchips continues to drop, smart systems continue to reduce the memory and functional levels at which they can compete with magnetic stripe technology. Lower functionality means less automation within a function or fewer automated functions; higher functionality means greater automation within a function or additional automated functions. For example, minimum functionality includes manual to semi-automatic vehicle location, semi-automatic data collection, data feed to manual accounting and stand-alone readers (not networked to central operational management). Maximum functionality includes automatic vehicle location, automatic data collection, electronic data feed to computerized accounting and readers networked to central operational management.

We can combine the various configurations into four groups for analytic convenience:

1. Magnetic stripe card system with minimum functionality
2. Magnetic stripe card system with maximum functionality
3. Smart card system with minimum functionality
4. Smart card system with maximum functionality

Marketability and Strategy

Three cost criteria are used to indicate marketability. The criteria measure the burden of the cost of the project on the transportation system, the passenger and, if the project is publicly financed, the general population. These ratios and illustrative breakeven values follow:

Criteria of Marketability

Cost Criteria	Breakeven (Maximum)
1. Percentage project is of transportation system (cost of project / annual capital and operating costs of transportation system)	1.5%
2. Percentage project is of passenger mile or passenger trip (cost of project per passenger / cost of passenger trips or passenger miles)	8.0%
3. Percentage project is per person (cost of project / general population)	$6 or $1/yr.

Ride Tracking Project Update

Assuming reasonable profitability, breakeven occurs at 2% of the market, or 300,000 passengers (4 million general population, based on 1990), for magnetic stripe card systems with minimal functionality and 6% of the market, or 15 million people, for smart card systems with maximum functionality. That is, a larger market is required to breakeven as automation increases and the technology becomes more sophisticated and expensive. Systems for these sites will cost $26-89 million, or 1.4-1.5% of transportation cost, 7.0-8.0% of the cost of passenger trips or passenger miles and $96-109 per passenger or $5-6 per resident. The different configurations breakeven as follows:

Marketability of Breakeven Markets for Various Configurations
(Over 7 years)

Card Type	Functionality	Market Size (%)	Project Cost ($ million)
Magnetic stripe	Minimum	2	26
Magnetic stripe	Maximum	3	43
Smart	Minimum	3	45
Smart	Maximum	6	89

Therefore, carriers might consider the following strategy:

1. Initially buy magnetic stripe card systems with minimum through maximum functionality and smart card systems with minimum functionality
2. As the market enlarges, add additional functionality at reasonable cost
3. Cooperate together to create a large enough market, i.e.,2-3%, for economy of scale

However, such cooperation requires scalable technology, such as the Ride Tracking System, in order to allow cost-effective configurations for each site.

Rural, Small City and Urban Applications

For example, let us apply electronic card systems to three population sizes, i.e.,to a rural area of less than 200,000 population, a small city or county between 200,000 and 1.0 million people and an urban area over 1.0 million population, based on averaging Section 15 Report data. We can base the cost of the electronic card system for different populations on the following table:

Card System Cost per General Population
(Amortized over 5 Years of Operation)

Market Size	Cost per Person ($)	
	Magnetic Stripe Card System with Minimum Functionality	Smart Card System with Maximum Functionality
Breakeven	5.20	6.00
100%	1.14	3.00

A rural area of 29,000 population might field a transportation system costing $2 million per year (capital and operations, 1990). In one year, the transportation system might provide 1 million passenger trips to 1,600 passengers, accumulating 4 million passenger miles. If the transportation system was to acquire an electronic card system, like Ride Tracking, as part of the breakeven market, the card system might cost $131,000-$199,000, or $26,000-$40,000 per year, if amortized over the first five years of operation, after which period only annual operating cost would remain. As the market enlarges, the cost should decrease to $29,000-100,000, or $6,000-$20,000, over the first five years.

A small city or county of 200,000 million population might incur a transportation system costing $15 million per year (capital and operations, 1990). In one year, the transportation system might produce 7 million passenger trips for 11,000 passengers, totaling 28 million passenger miles. If the transportation system was to buy an electronic card system as part of the breakeven market, the card system might cost $1,040,000-$1,200,000, or $208,000-$240,000 per year, amortized over the first five years of operation, after which period only annual operating cost would remain. As the market grows, the cost should decline to $228,000-$600,000, or $46,000-$120,000, over the first five years.

An urban area of 1.2 million population might require a transportation system costing $89 million per year (capital and operations, 1990). Per year, the transportation system might generate 36 million passenger trips for 47,000 passengers, traveling 178 million passenger miles. If the transportation system was to purchase an electronic card system as part of the breakeven market, the card system might cost $5.9-7.0 million, or $1.2-1.4 million per year, amortized in the first five years of operation, after which period only annual operating cost would be incurred. As the market enlarges, the cost should decrease to $1.3-3.5 million, or $0.3-0.7 million, over the first five years.

Three Applications of Transportation Card Systems by Population Size

Characteristic	Rural Area	Small City or County	Urban Area
General population	29,000	200,000	1.2 mil.
Transp. sys. cost ($ mil.)	2	15	89
Passengers	1,600	11,000	47,000
Passenger trips/yr. (mil.)	1	7	36
Passenger miles/yr. (mil.)	4	28	180
Elec. card system cost paid over 5 years			
Breakeven	130,000-200,000	1.0 mil.-1.2 mil.	5.9 mil.-7.0 mil.
100% market	30,000-100,000	230,000-600,000	1.3 mil.-3.5 mil.

The cost of electronic card systems, covering magnetic stripe with minimum functionality to smart with maximum functionality, range from 0.7-1.2% of the cost of the transportation system per year at breakeven market prices and 0.1-0.6% per year at 100% market prices in 1995. If we adjust for the savings to transportation systems from load sharing, i.e., up to 15% (per IMI analysis), the electronic card systems cost 0.9-1.4% of transportation system cost at breakeven prices and 0.2-0.7% at 100% market prices. According to the above criteria of marketability, a card system is affordable if it costs less than 1.5% of transportation system cost, if amortized over the first five years of operation. Therefore, the above figures indicate that all configurations are affordable for all sites, even after load sharing, and can be implemented according to the above strategy.

Given the decrease in the cost of card systems as the market increases (due to economy of scale), when should a transportation system purchase an electronic card system? Should the transportation system purchase a card system when the latter first becomes affordable at breakeven prices or should the transportation system wait until the cost of the card system drops further? The transportation system should purchase the card system if its benefits exceed $700,000-$900,000, or 1.0%, of the transportation system cost per year.

INVESTMENT

Private

Private financing is considered in three ways: return on profit on sales for component manufacturers, return in interest for cash investors (which may be financial institutions or component manufacturers) and bank loans. In this analysis, returns in sales profit and cash are calculated at a maximum of 21% and low-interest loans are estimated at a minimum of 11%. For example, the Small Business Administration guarantees low-interest loans, currently up to about $800,000, at 11%.

Ride Tracking Project Update

The investment required to finance the project at breakeven ranges from $7-25 million. That is, a magnetic stripe card system with minimum functionality should cost $26 million and require a private investment of $7 million. A magnetic stripe card system with maximum functionality or a smart card system with minimum functionality should cost about $44 million and require an investment of $13 million. A smart card system with maximum functionality should cost $89 million and require $25 million in capital.

At 100% of market, i.e., the entire United States, involving 13.6 million passengers and 249 million general population (based on 1990), and assuming reasonable profitability, the project costs between $285 million and $726 million. The project is 0.30%-0.75% of transportation cost, is 1.5%-3.8% of the cost of passenger trips or passenger miles and costs $21-53 per passenger or $1-3 per resident.

The investment required to finance the project ranges from $39-160 million. That is, a magnetic stripe card system with minimum functionality should cost $285 million and require a private investment of $39 million. A magnetic stripe card system with maximum functionality or a smart card system with minimum functionality should cost $439 million and require an investment of $82 million. A smart card system with maximum functionality should cost $726 million and require $160 million in capital.

Investment for Breakeven and 100% Markets
(Over 7 years)

Card Type	Func-tion-ality	Breakeven Market Size (%)	Breakeven Project Cost ($ mil.)	Breakeven Investment ($ mil.)	100% Project Cost ($ mil.)	100% Investment ($ mil.)
Magstripe*	Minimum	2 **	26	7	285	39
Magstripe*	Maximum	3 **	43	13	430	80
Smart	Minimum	3 #	45	13	439	82
Smart	Maximum	6 ##	89	25	726	160

* Magnetic stripe.

** 2% = 5.0 million general population, 300,000 passengers, 159.3 million passenger trips or 759.8 million passenger miles.

\# 3% = 7.5 million general population, 410,000 passengers, 239.0 million passenger trips or 1,139.7 million passenger miles.

6% = 15.0 million general population, 810,000 passengers, 478.0 million passenger trips or 2,279.4 million passenger miles.

Government

The Federal Transit Administration has indicated that Ride Tracking could be eligible for capital funding for public transportation. Optionally, federally guaranteeing the private sector loans would reduce the interest rate and retain more savings.

In addition, as noted above, Ride Tracking can give these governments the opportunity to preserve the $160 million net savings per year in subsidies (based on 1990) by load sharing with cost control, while maintaining or improving non-emergency transportation services, assuming governments wish to preserve the services and not just save the funds. (Load sharing involves shifting some passengers from demand-responsive to fixed-route modes. IMI estimates that up to 23% of demand-responsive passengers can be shifted.)

If governments wish to assure the savings, they could invest in Ride Tracking. Such investment is similar to private companies investing in their own increased effectiveness. The Ride Tracking System, configured for non-emergency transportation subsidies (e.g., Medicaid), will cost $35-70 million more for initiation readers to certify clients at their appointments for their trip subsidies. (Similarly, the cost of initiation readers for other third-party promotions and subsidies can be costed separately and charged to the third parties.) If both capital and a loan are included, the federal government optionally could guarantee the loan (but not the private capital, which represents the private risk) in order to keep the interest rate down and retain more savings. To illustrate the following analysis assumes that the federal government would contribute two-thirds and the states one-third of the government contributions, per Medicaid.

Governments can breakeven, i.e., they can pay for the entire system with no net cost or savings, upon operation of the system in 1-2% of the market (2.5-5.0 million general population). The investment required to finance the project at breakeven ranges from $6-19 million. That is, a magnetic stripe card system with minimum functionality should cost $9 million and require a public investment of $6 million. A magnetic stripe card system with maximum functionality should cost $22 million and require an investment of $13 million. A smart card system with minimum functionality should cost $20 million and require an investment of $12 million. Finally, a smart card system with maximum functionality should cost $31 million and require $19 million in capital.

As market share increases to 2-3%, governments can fully recover their savings thereafter. Magnetic stripe card systems and smart card systems with minimum functionality should fully recover savings beginning at 2% of market and $ 7 million in net savings. A magnetic stripe card system with minimum functionality should cost $12 million and require an investment of $6 million. A system with maximum functionality should cost $22 million and require an investment of $13 million. A smart card system with minimum functionality should cost $20 million and need an investment of $12 million. A smart card system with maximum functionality should fully recover savings, starting at 3% of market with project cost of $39 million, investment of $20 million and net savings of $10 million.

Ride Tracking Project Update

The investment required to finance the project for the entire United States and preserve the $160 million net savings per year ranges from $49-182 million. That is, a magnetic stripe card system with minimum functionality should cost $327 million and require an investment of $49 million. A magnetic stripe card system with maximum functionality should cost $598 million and require an investment of $123 million. A smart card system with minimum functionality should cost $480 million and require an investment of $93 million. A smart card system with maximum functionality should cost $811 million and require $182 million in capital.

Investment for Breakeven, 100% Savings and 100% Market
(Over 7 years)

Breakeven

Card Type	Functionality	Market Size (%)	Project Cost ($ mil.)	Investment ($ mil.)
Magstripe*	Minimum	1 **	9	6
Magstripe*	Maximum	2 #	22	13
Smart	Minimum	2 #	20	12
Smart	Maximum	2 #	31	19

100% Savings

Card Type	Functionality	Market Size (%)	Project Cost ($ mil.)	Investment ($ mil.)	Savings ($ mil.)
Magstripe*	Minimum	2 #	12	6	7
Magstripe*	Maximum	2 #	22	13	7
Smart	Minimum	2 #	20	12	7
Smart	Maximum	3 ##	39	20	10

100% Market
(Savings: $349 mil.)

Card Type	Functionality	Market Size (%)	Project Cost ($ mil.)	Investment ($ mil.)
Magstripe*	Minimum	100 ^	327	49
Magstripe*	Maximum	100 ^	598	123
Smart	Minimum	100 ^	480	93
Smart	Maximum	100 ^	811	182

Ride Tracking Project Update

* Magnetic stripe.

** 1% = 2.5 million general population, 100,000 passengers, 79.7 million passenger trips or 379.9 million passenger miles.

\# 2% = 5.0 million general population, 300,000 passengers, 159.3 million passenger trips or 759.8 million passenger miles.

\#\# 3% = 7.5 million general population, 410,000 passengers, 239.0 million passenger trips or 1,139.7 million passenger miles.

^ 100% = 248.7 million general population, 13.6 million passengers, 7,965.6 million passenger trips or 37.990.8 million passenger miles.

Government-Private Partnership

Governments may finance the project alone and reap the savings entirely or they may share the investment, risk and rewards with the private sector in a financial partnership. This last strategy combines public and private investments and requires both public and private investors to independently approve the investment. Even though government would share part of its savings with the private sector in exchange for the latter taking some of the risk and responsibility, the result should still be substantial returns (21%) for all parties (except lenders of low-interest loans). For example, at the public breakeven markets (1-2%), where the project will cost $24-56 million and require $6-19 million in investment (see above), the public share of the investment could be $1-3 million (10-15%), which should earn a return of $3-7 million in savings. The private share of the investment could be $6-16 million (85-90%).

Breakeven for Government-Private Partnership

Card Type	Function -ality	Market Size (%)	Project Cost ($ mil.)	Investment Total ($M)	Public ($M)	Public (%)	Priv. ($ M)	Public Savings ($ mil.)
Mag*	Minimum	1 **	24	6	1	13	6	3
Mag*	Maximum	2 #	42	13	2	15	11	7
Smart	Minimum	2 #	40	12	2	15	11	7
Smart	Maximum	2 #	56	19	3	10	16	7

* Magnetic stripe.

** 1% = 2.5 million general population, 100,000 passengers, 79.7 million passenger trips or 379.9 million passenger miles.

\# 2% = 5.0 million general population, 300,000 passengers, 159.3 million passenger trips or 759.8 million passenger miles.

Note: Numbers may not add to sums due to rounding.

As the market increases, the returns will increase. Therefore, the economics of the Ride Tracking System appear very attractive.

ENDNOTES

1. Some of the earlier parts of this article were presented at the ITS America Fifth Annual Meeting and Exposition, March 15-17, 1995, Washington, DC.

2. The model is based on the medium, function and cost for storing, processing and communicating data. The media include magnetic stripe and intelligent chip. Functionally, magnetic stripes, which only can store data (i.e., contain memory only), are more limited than intelligent chips, which can store and manipulate data (i.e., contain memory and processing). Cards based on the latter technology are popularly called "smart" cards. In addition, the maximum storage capacity of magnetic stripes is less than microchips. The study not only compared current system costs, but projected decreasing system costs as caused by falling magnetic stripe and chip costs. Although magnetic stripe technology is significantly cheaper than intelligent chip technology, chip costs are falling very rapidly compared with magnetic stripes, which have nearly reached their minimum cost.

3. Magnetic stripe technology might stave off this situation for a while if it resolves some of its disadvantages, such as better securing the medium, which is being accomplished, and multiplying memory capacity by adopting a denser format, as have computer disk manufacturers.

4. Federal Transit Administration, U.S. Department of Transportation, National Transit Summaries and Trends for the 1990 Section 15 Report Year (Washington, DC), June 1992, pp. 21-2.

Concurrent Session #3
1. Disaster Planning and Practice for Rural Transit Systems

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Elements of Providing Public Transit Disaster Services

1. Pre-Disaster Agreement
2. Involvement in Emergency Preparedness
   (Focus on the Team not the Individuals)
3. Declaration of Disaster - Who's in charge?
4. Communication and Control - Equipment Usage,
   Media and Public Announcements
5. Participation at Emergency Center
   and Team Coordination
6. Employee Protection and
   Availability of Emergency Supplies
7. Political Oversight
8. Balancing Disaster Response While Continuing
   Regular Public Transit Services
9. Vehicles Mix and Usage
10. Disaster Service and Follow Up - What We Did
11. Post-Disaster Evaluation and Thank-Yous
12. FEMA and Other Disaster Funding - Getting Paid

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Sonoma County Transit

The Role of Transportation Operators in Times of Local Emergencies

By Tom Roberts

Disasters come in all shapes and sizes from localized toxic spills to tornados and everything in between. Most come without warning and no two are exactly alike. Whether your transit system is large or small, urban or rural, public, non-profit, or for profit, in times of emergency you can expect to play a vital role in your community. Your dispatchers, drivers, management, and vehicles are all valuable resources that can be called upon for the movement of people or materials. You have unique expertise and tools. Hence, the preparations you make today are crucial to your ability to offer a coordinated and effective response in times of local disasters.

At Easy Lift Transportation in Santa Barbara, California, we have learned this lesson well. With the disasterous "Painted Cave" fire of 1990, the Northridge earthquake of 1994, and two devestating floods in 1995, we have repeatedly found ourselves a focal point in the community's response efforts. Fortunately, a little advance planning coupled with new experience gained from each tragic event, has left our agency well prepared to cope with the challenges we have faced.

The particular stories surrounding Easy Lift's role in each of these events could comprise a novellete (see related story: *Painted Cave-The Santa Barbara Fire of 1990* (June 1990)). Rather then re-tell these tales, the purpose of this document is to focus on specific steps transit systems and human service agencies with vehicles can take in becoming better prepared to respond in times of disaster. We will focus on the two major areas of education and logistics.

Education

Educate Your Agency

Does your agency have its own disaster plan? Are drivers supposed to automatically report to work once an emergency is either declared or obvious? What if access to your transit facility is blocked? Ironically, Easy Lift developed our first in-house disaster plan, now part of our personnel manual, and briefed our staff just one week prior to the Painted Cave fire! All the tools at your disposal can be rendered ineffectual if your staff isn't briefed in advance on what to do when the time comes. Never assume that only top management needs to know the plan. As the Painted Cave fire story demonstrates, key personnel may be unavailable at that critical time.

Educate Your Clients

Each region of the country is prone to differnt types of disasters. Some emergencies, such as toxic spills, train derailments, airplane crashes etc. can happen anywhere. Regardless of the emergency, most communities have special needs populations such as senior citizens and persons with disabilities. It should come as no surprise that these clients often have special needs in times of crisis. For example, how will the police department evacuate someone who depends upon a respirator? How will an elderly deaf gentleman hear the call for evacuation broadcast out over the P.A. system of a passing police cruiser?

At Easy Lift we have held special workshops for, and made material available to, our elderly and disabled clients on how to prepare themselves for emergencies. There are extra preparations that these folks need to make. In addition, we meet periodically with local police and fire officials to educate them on the special needs of these persons in times of crisis. Personnel in these public agencies changes over time. Hence it is important to keep them informed.

Educate Public Agencies

As mentioned previously, Easy Lift meets periodically with our local police and fire department to educate them about the special needs of elderly and disabled clients. But these meetings have another value. As these agencies likely have their own disaster plans, it is important that you become a part of their planned response. They need to know what you can offer as well as how to contact you should the need arise. You may not end up transporting people at all. During one of the Santa Barbara floods of 1995, we evacuated an entire Red Cross shelter caught in the flood plain; food, cots, blankets, dogs, chairs, the whole works!

Educate Other Human Service Agencies

In times of a crisis, many local charaties and church groups will be delivering all sorts of assistance. Do they know who you are? Do you know who *they* are? Does anybody know what each organization has to offer in times of crisis? Easy Lift, in conjunction with the local Red Cross chapter, conducted a survey and created a master data base of all human service agencies in the community. We cataloged what each agency could offer in times of crisis, (ie: beds, the housing of animals, food preparation, etc.) and how to contact them. Every few months a group of representatives from various charities meets at the Red Cross in an on-going planning effort.

Educate the Media

Do local T.V. and radio stations know who you are and what you do? Introduce yourself to them. During a disaster, issue frequent press releases to them so that they can inform the community of what services you can offer. Thanks to the local media, during the '95 floods, we responded to requests for assistance made directly from individuals as well as those forwarded by public agencies.

Logistics

Electrical Power
Every home and office in America is dependent on electic power. At Easy Lift, our radio base station, computer scheduling system, telephone system, and FAX machines are crucial to our operation. During the Northride earthquake of 1994, large portions of California, including Santa Barbara, were without power for nearly 24 hours. Fortunately, Easy Lift had invested in a $700 gasoline generator for just such an occassion. When the power went out, the generator came out of storage and in 20 minutes we were back on line. Don't forget that you will also need to store fuel and heavy duty extension cords. If storing fuel is a problem at your facility keep a siphon around. Remember that you have a fleet of vehicles with gas in their tanks if you need it. You might also consider placing 110v power converters in the engines of some of your vehicles. This allows the van itself to act as a power generator.

Two-Way Radio Communication
The ability to communicate is crucial in times of crisis. Investing in a few hand held radios is a good idea. It is also important to remember to keep them charged. During the '95 floods, our staff occasioanlly found themselves dispatching from several locations away from both our base station and vans.

Santa Barbara sits on narrow a coastal plain between towering mountains and the Pacific Ocean. Our radio system, like most in our community, tranmits to a "repeater" on the mountain top that re-broadcasts the signal out to our vehicles. But what happens if the repeater goes out? An investment of proven value to our agency was in radio equipment that can transmit via the repeater or, at the flip of a switch, go to line of sight transmission. While line of sight has its limitations, it is better then no communication at all.

In addition, back in 1988 Easy Lift relaized that while we had two-way communication between our base and fleet many other non-profit groups had their own vans but no such communication capabilities. With a grant from a private foundation, Easy Lift placed free two-way radios on our frequency in some 30 vans from other groups. Today, Easy Lift acts as a daily central dispatch center for these groups. As an added bonus, in times of a disaster, we have radio contact with their vehicles to assist in coordinated disaster response.

Telephone Communication
Like electricity, our world is dependent upon telephone communication. During the Northridge earthquake, we discovered that while our regular phone lines were either down or overloaded, our portable cellular phones stayed on line. In fact, it was the cellular connections that became our major link to the City's disaster center. Again, like hand held raios, it is important to remember to keep your portable celluar phone charged.

Fuel

A vehicle without fuel is just another storage shed. Does the place where you fuel your vehicles have back up generator power? Most gas stations do NOT. Find out which service stations or public properties have gas pumps with back up electrical power. Make advance arraingments to get priority fueling in the event of an emergency.

You Know Your Clients Best

If you operate a human service transportation agency, chances are you know who your clients are. If you operate transportation for elderly and disabled clients, you likely know basic facts about these clients such as their disability and mobility status. This information could be of vital assistance to authorities in the event area wide or localized evacuations are required. At Easy Lift we have modified our computer scheduling system so that we can pinpoint any neighborhood and have the computer instantly tell us if any of our clients live there and thier disability and mobility status. This information can be printed out and provided to authorities via phone, FAX, computer modem, or hand delivery. We used this feature extensively as various neighborhoods became engulfed in water during the floods of '95.

Conclusion

If experience has taught us anything it is that no two disaters are alike. In addition, no matter what contingency one plans for, something unanticipated will always happen. However, some basic pre-planning goes a long way to ensuring the best possible coordinated response. In the end, it really is a matter of life and death.

Tom Roberts, Executive Director of Easy Lift Transportation, is a former Board member of CalACT, was named Transportation Manager of the Year for 1993 by CTAA, and is an elected member of the Santa Barbara City Council.

Attachments:

1. Roberts, Tom; *Painted Cave-The Santa Barbara Fire of 1990* (June 1990)

2. Roberts, Tom; *Excerpt from Easy Lift Employee Manual* (January 1993)

Painted Cave- The Santa Barbara Fire of 1990

By Tom Roberts

It was supposed to be a little worry free get-away to the National Transportation Expo in Phoenix, Arizona. The stress of 120+ temperatures and hours spent stranded at LAX waiting for the runways in Phoenix to cool down, quickly faded behind the excitement of Opening Session and the grand Trade Show floor. That was Wednesday Morning. By nightfall, everything would change.

The word came just before midnight. Slipped under my hotel room door, the cryptic note said simply "Easy Lift is running. Time 11:54pm." Found on an early AM trip to the bathroom, the message was confusing at best, ominous at worst. After all, Easy Lift service ends at 6 pm on weeknights.

A phone call confirmed the worst. I turned on CNN news and there it was. Santa Barbara was burning. What had appeared in the late afternoon to be nothing more than a small brush fire in the foothills, by nightfall had become nothing short of sheer terror. Driven by 60 mile per hour "sundowner" winds and 108 degree temperatures, the fire storm descended upon the town consuming an acre a minute, laying waste to everything in its path. Residents and businesses had literally only minutes of warning to evacuate before the fiery hell engulfed their neighborhoods and shopping centers. As darkness fell and the inferno raged on, the night sky was a blaze in a volatile mixture of smoke and ash and fire.

As the turmoil and panic unfolded, Easy Lift staff went to work; or tried to. The fire had swept down from the mountains, jumped the six lane freeway and created an impenetrable wall of flames virtually cutting off all North/South access right down to the ocean. While Easy Lift's base and fleet were on the North side of the fire wall, most drivers and other staff were on the South. While Easy Lift had done emergency planning and is part of the County's emergency response system, no one was prepared for this scenario.

Easy Lift's Operations Manager left her home while her street was on fire and reported to work. She was joined their by a senior driver and his wife. Easy Lift's Senior Transportation Supervisor, along with the staff bookkeeper, had already begun making phone calls from their homes in an attempt to locate drivers and make contact with various convalescent facilities that might need evacuation. Shortly, all the staff that could be utilized were at the ready and telephone calls were made to 911, the Red Cross, radio stations and emergency networks informing them of Easy Lift's ability to render assistance on the North side of the blaze. Easy Lift's cellular phone units and portable radios could be used should standard phone service or electricity fail. Easy Lift, like virtually all of Santa Barbara, remained on alert around the clock. It was a long, tense and exhausting night.

By Thursday morning, the smoke filled sky shed light upon the devastation. Entire housing tracts, business districts, parks and schools were gone. The massive mobilization of resources continued as firefighters, public workers and volunteers fought a multi-front battle to maintain order and assist those in need. The fire, by no means contained, had at least given way enough to allow some North/South traffic flow. All drivers from all shifts reported to work as radio and television announcements encouraged displaced persons in need of transit to call Easy Lift. Assistance of every conceivable type was provided by organizations, business, and individuals as the community pulled together. But the danger was not over yet.

As the evening approached and the fire continued to blaze in the foothills, everyone anxiously waited to see if the legendary but rare Santa Barbara "sundowner" winds that fed Wednesday's inferno would come back to bring another night of terror. In preparation, our Operations Manager made the decision to send each driver home with a vehicle so as to avoid the previous night's dilemma. Meanwhile, desperately trying to get home, I remained hostage to airport closures and commuter bus schedules. My house in the foothills, while sparred the night before, was directly in the path predicted for the fire's next descent.

Darkness fell and to everyone's relief the weather pattern of the prior few days took an abrupt turn. Temperatures dropped and a cool and damp sea breeze whisked across Santa Barbara. This was the beginning of the end of one of the worst fires in California history. Almost 600 structures lost, nearly a thousand people homeless, and half a billion dollars in damage. Fortunately the Director's home was sparred by 1/2 a mile and remarkably the flames only singed the area around that of the Operations Manager's.

Everyone in Santa Barbara was immeasurably altered by the events of the last week of June 1990. For some, the turmoil will fade into a passing thought or memory. For others, the anguish will continue for a lifetime. As is usually the case in times of disaster, the artificial barriers of age, income, race, and so one give way to genuine concern and cooperation. Neighbors and strangers, organizations and individuals band together to give of themselves, providing testimony to the truly limitless nature of human spirit and compassion. When all is said and done, it is this lesson of hope and humanity that must be carried beyond the tragedy forward into our future.

June 1990

Excerpt from Easy Lift Employee Manual

Emergency Preparedness Plans

As the CTSA for South Santa Barbara County, Easy Lift is a quasi-public agency. We have a three resources under our control that are critical in times of emergencies; Information, Transportation and Communication. Because of this, we have a responsibility to be prepared to serve our community.

Disasters occur in all shapes and sizes. The only thing they have in common is that they happen without warning. It is our responsibility to develop contingency plans that will enable Easy Lift to respond appropriately to the best of our ability. The type of response will vary depending on the magnitude of the disaster or accident. For example, a major earthquake could paralyze the entire area while a toxic spill might be more localized.

Identification and Evacuation of Disabled/Frail-Elderly
Easy Lift's data base contains the names and addresses of over 2,000 disabled and/or frail-seniors with mobility impairments, most of whom are living independently. We believe this is the most comprehensive such registry in south County. Our computer allows us to pinpoint mobility impaired individuals within any 4/10th of a mile area. This can be a valuable resource.

In a localized emergency, identify zones that are affected and print a list of all passengers in those zones. Some prioritization should be used in order to respond to those individuals most likely to be in immediate need.

What Should Our Drivers Do?
We are all human and in an emergency it is only natural that we will be thinking about our loved ones. In the event of a major disaster, such as an earthquake, once you are certain that your loved ones are safe and secure, your expertise will be desperately needed at Easy Lift.

In the event of a community disaster during the day, drivers should await radio instructions from base. Or, in the event that it occurs in the evening, weekend, or communications are down, drivers should report immediately to the following locations:

City of Santa Barbara Emergency Services 215 E. Figueroa (965-3828)	Santa Barbara Red Cross State Street	Goleta Valley Community Center

After hours, all personnel should report to the office or the locations above.

Dispatch
The City and County Offices of Emergency Management, Fire and/or Police Departments may make specific requests for our services. In the event of an emergency, attempts should be made to notify their respective command centers that we are available. However, if they do not request our services, we will not just sit idle.

Use common sense to identify institutions and/or individuals that may require our

Excerpt from Easy Lift Employee Manual

assistance. These might include:

Hillside House	Convalescent Facilities	St. Vincent's
Rehab Institute	Friendship Center	Senior Nutrition Sites etc.

Attempt to make contact with these institutions and/or dispatch vans to the scene.

In the event of a continuing emergency, such as the Paint Fire or an Earthquake with aftershocks, it may be prudent to send vehicles home with drivers so that the fleet will be disbursed around the community. This way, all the vans will not be trapped in one place should roads become blocked.

Communication:
Easy Lift's radios and base station should be modified to allow some form of line of sight transmission in the event that the mountain repeater is down.
Easy Lift presently has 2 battery hand held radios, one portable cellular phone, and one cellular phone in the Director's car. Sometimes, cellular phones will still be working when land lines are down.

Misc: Drinking water, first aid supplies, etc. should all be on hand at Easy Lift.

Concurrent Session #3
3. Medicaid Practice

Successful Elements in the Medicaid Transportation Program

Dottie Ford
Tranportation Program Manager
Medical Assistance Administration
Washington State Department of Social and Health Services
Olympia, WA

The Medicaid Transportation Program in the State of Vermont

Kenneth J. Graska
Executive Director
Vermont Public Transportation Association

SUCCESSFUL ELEMENTS IN THE MEDICAID TRANSPORTATION PROGRAM

Dottie Ford, Trasportation Program Manager

WASHINGTON STATE MEDICAL ASSISTANCE ADMINISTRATION
MEDICAID TRANSPORTATION PROGRAM

GUIDING PRINCIPLES

* Develop a Service that is Community Based and Responsive
* Establish a Partnership between Brokers and Medical Assistance Administration
* Improve Service Access and Quality
* Increase Coordination and Cost Efficiency

REASONS TO INSTITUTE A BROKERED SYSTEM

* Local Resource Development and Maintenance
* More Accessible, Appropriate and Higher Quality Service
* Better Cost Containment and Fraud Control

IMITATE THE WASHINGTON STATE MODEL

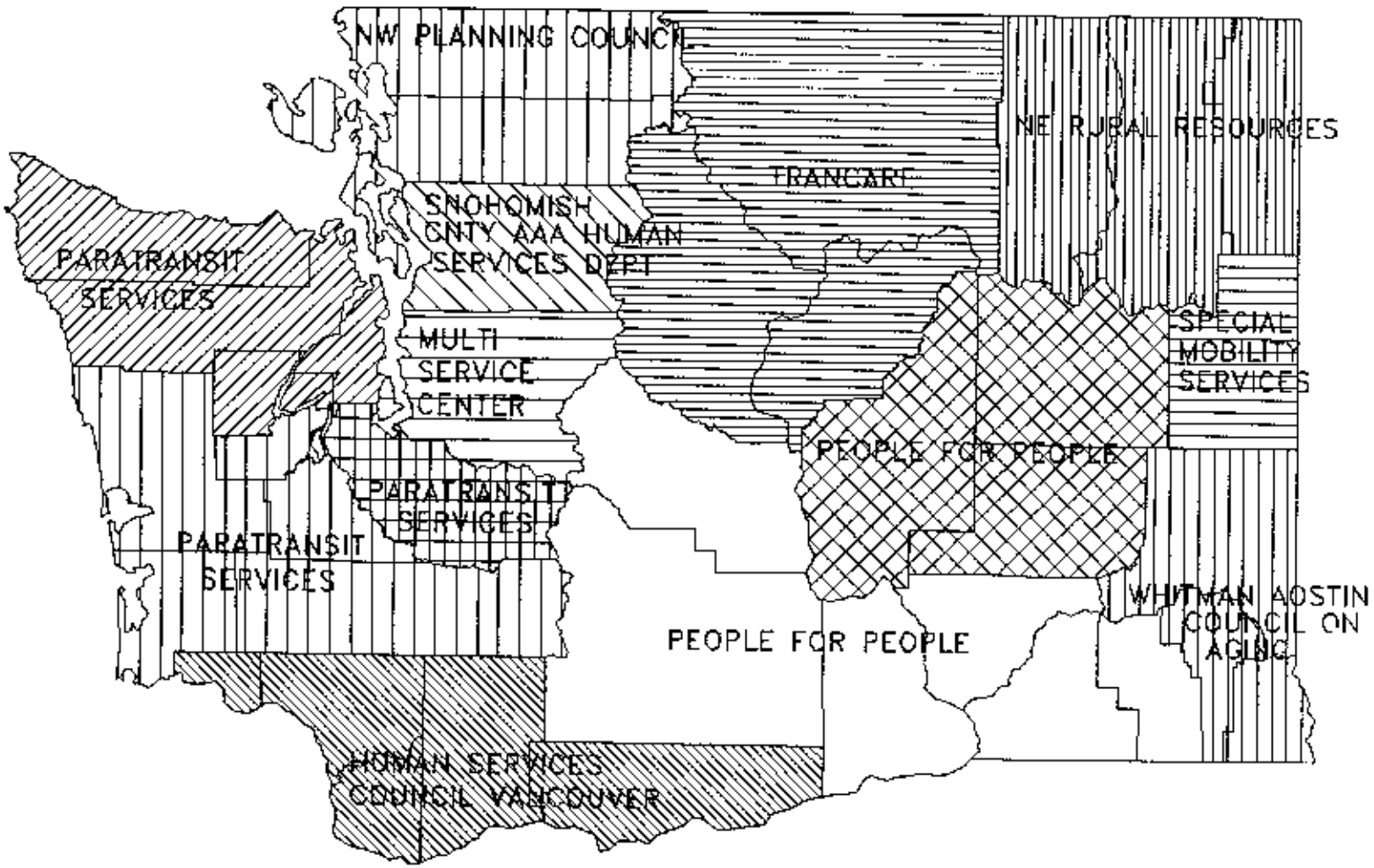
* Establish Regional/Local Brokers
* Develop Statewide Standards; Implement Locally
* Offer Other Social Service Programs the Opportunity for Brokered Transportation
* Allow Lodging, Meals and Escorts when Medically Necessary
* Encourage Flexibility and the Use of Good Judgement

IMPROVE UPON THE WASHINGTON STATE MODEL

* Prohibit Brokers as Providers
* Establish Electronic Transmission of Data and Billings
* Apply a Split Rate to Mileage Reimbursement
* Set up a Statewide System of Gas Stations to Honor Gas Vouchers
* Develop an Escort Program
* Explore Alternative Pricing/ Incentives

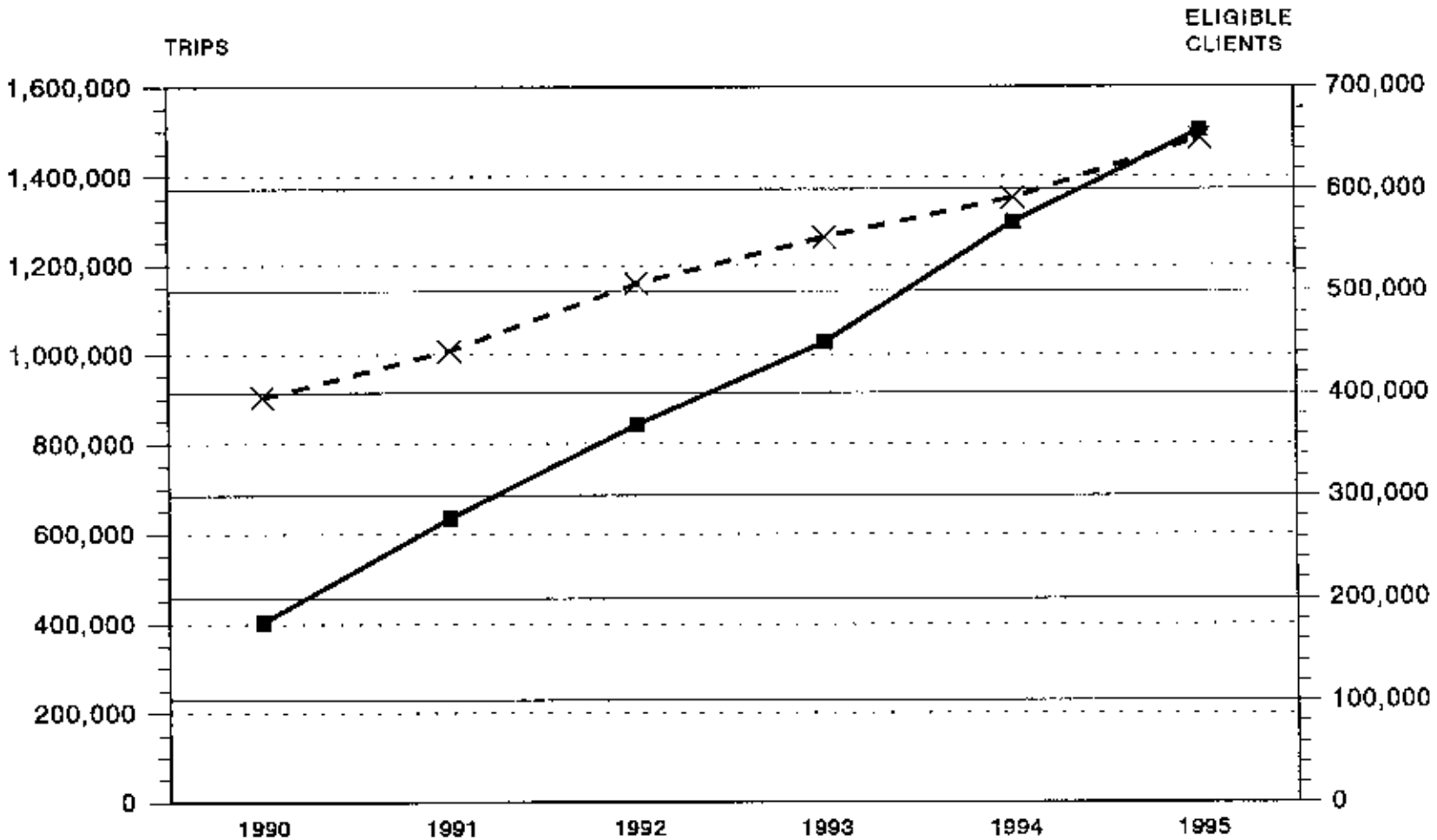
MEDICAL ASSISTANCE ADMINISTRATION TRANSPORTATION PROGRAM

OCTOBER 1995



MEDICAL ASSISTANCE ADMINISTRATION TRANSPORTATION PROGRAM
STATEWIDE TOTAL TRIPS AND MAA ELIGIBLE CLIENTS

FISCAL YEARS 1990-95

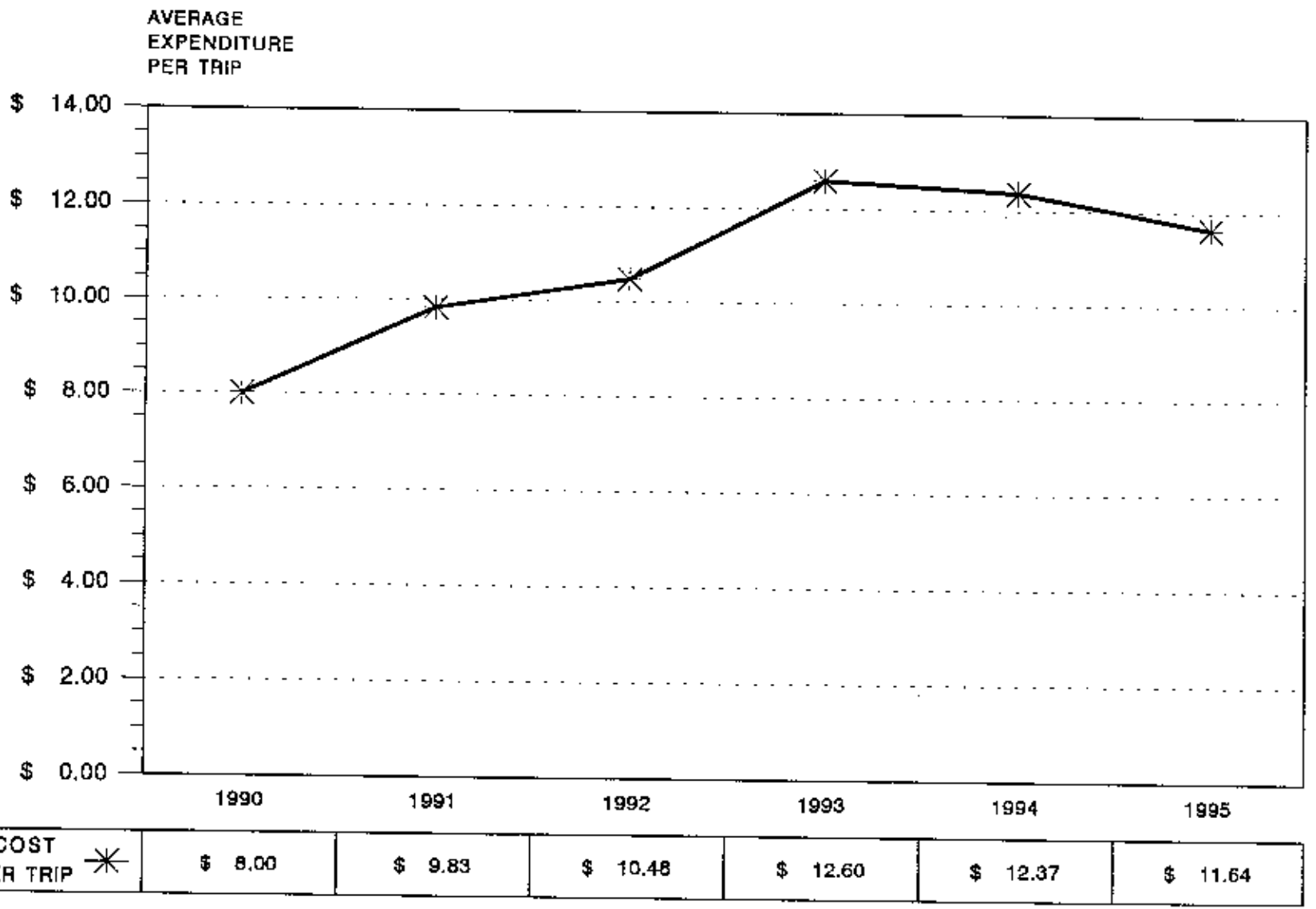


	1990	1991	1992	1993	1994	1995
TRIPS	404,338	636,702	842,562	1,027,770	1,297,922	1,504,042
ELIGIBLES*	394,991	441,116	507,374	553,066	591,825	650,157

* Average monthly eligible clients during year.

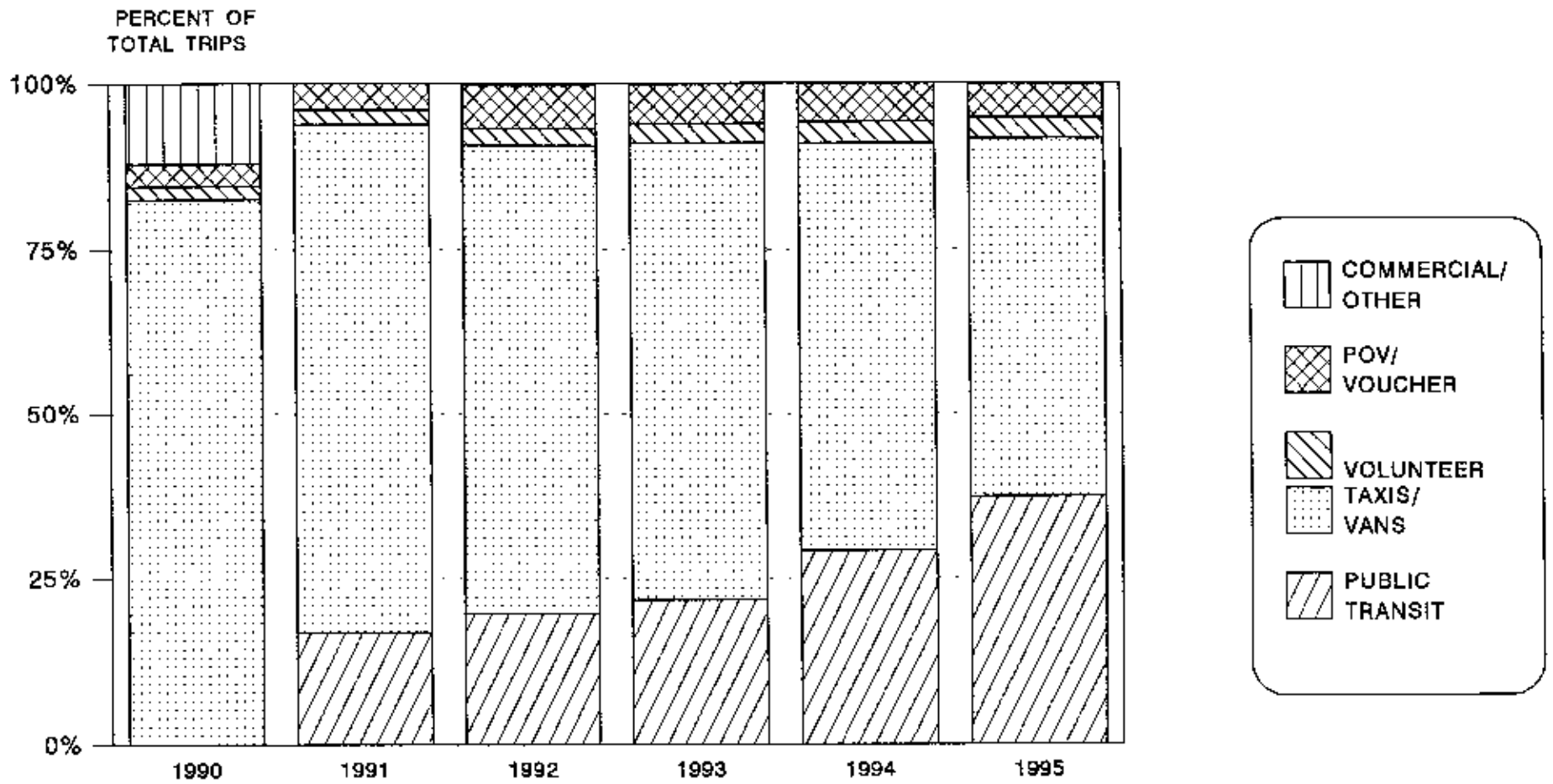
MEDICAL ASSISTANCE ADMINISTRATION TRANSPORTATION PROGRAM
STATEWIDE AVERAGE EXPEDITURE PER TRIP

FISCAL YEARS 1990-95



	1990	1991	1992	1993	1994	1995
COST PER TRIP	$ 8.00	$ 9.83	$ 10.48	$ 12.60	$ 12.37	$ 11.64

MEDICAL ASSISTANCE ADMINISTRATION TRANSPORTATION PROGRAM
STATEWIDE TOTAL TRIPS BY TYPE OF TRIP
FISCAL YEARS 1990-95



	1990	1991	1992	1993	1994	1995
TOTAL	404,338	636,702	842,562	1,027,770	1,297,922	1,504,042
PUBLIC TRANSIT	0	107,641	165,819	223,106	379,731	562,924

VERMONT'S MEDICAID TRANSPORTATION PROGRAM

HISTORY OF VERMONT PUBLIC TRANSPORTATION ASSOCIATION

Incorporated in 1986, the Vermont Public Transportation Association (VPTA), was originally created to promote and develop public transportation in the state. Unlike most trade associations, VPTA was established not just as an organization representing common interests and needs, but more so as a "working" organization to serve and assist in the day-to-day operation of its members with planning and technical assistance, transportation brokerage services, capital purchases, human service transportation coordination, and funding assistance as a pass through clearinghouse for various state and federal aid programs.

VPTA's members cover a broad spectrum in terms of organization size and services offered. Chittenden County Transportation Authority, serving Burlington, for example, is the state's largest public transportation system offering a full menu of transportation services beyond traditional fixed route bus service. On the other hand, transportation providers such as Rural Community Transportation in St. Johnsbury and Franklin-Grand Isle Community Action in St. Albans rely primarily on VPTA's Rideshare and Ridematch Program, and literally hundreds of volunteer drivers to provide transportation services for the special travel needs of thousands of northern Vermonters. While different in size and scope, common to all of VPTA's member transportation providers are the array of programs and services available to meet the individual needs of each organization.

VPTA offers a number of different services and programs to its members; however, the focus of this presentation is the Medicaid transportation program which is VPTA's largest and most heavily utilized program.

PROGRAM BACKGROUND

The Medicaid transportation program in Vermont is administered by the Medicaid Division of the Department of Social Welfare (DSW) within the Agency of Human Services (AHS). The largest component of the program is handled through a provider agreement between the Department and the VPTA. VPTA operates the program using **ten (10) regionally located brokers** (consolidated to nine (9) in FY 1996) who are charged with determining the most appropriate, least costly transportation for customers. The brokers make extensive use of volunteer drivers, as well as public transit services, taxis, and mileage reimbursement for "hardship" cases. This segment of the program provided 429,631 passenger trips in Fiscal Year 1994-95 at a cost of $3,002,193. The FY 1994-95 cost per trip for the program was $6.99. (Per trip costs have declined steadily over the last four (4) years.) Another segment of the Medicaid transportation program is not administered through VPTA; it is used by the Department of Mental Health/Mental Retardation for the Medicaid-eligible transportation of those people served by local mental health agencies.

This presentation will focus on the VPTA brokerage which is the major provider of non-emergency medical transportation for Vermont's Medicaid-eligible citizens. The brokers include one small urban public transportation system, several small rural public transportation agencies, and several rural paratransit providers and community action agencies. All brokers are subject to service approval, claims processing, and utilization review like any other Medicaid provider. The following guidelines apply to the Medicaid transportation provided by the brokers:

1. Prior authorization is required. (Exceptions may be granted in a case of a medical emergency.)

2. No other transportation options can be available to the Medicaid recipient.

3.- Transportation is provided to and from necessary medical services.

4. The medical service is generally available to and used by other members of the community or locality in which the recipient is located. A recipient's freedom of access to health care does not require Medicaid to cover transportation at unusual or exceptional cost in order to meet a recipient's personal choice of provider.

5. Payment is made for the least expensive means of transportation which is suitable to the medical needs of the recipient.

6. Reimbursement for the service is limited to enrolled transportation providers.

7. Reimbursement is subject to utilization control and review in accordance with the requirements of Title XIX.

8. Any Medicaid-eligible recipient who believes that his or her request for transportation has been improperly denied may request a fair hearing.

PROGRAM OPERATION AND ADMINISTRATION

Service Provision

The local brokers are responsible for securing the least expensive, most appropriate mode for each trip request. Brokers are contacted directly by recipients or by organizations acting on behalf of recipients. These organizations include Social and Rehabilitation Services, the Department of Social Welfare, and the Area Offices on Aging, and other state public offices.

The brokers first must determine if the client is Medicaid eligible. The brokers verify eligibility by checking the recipient's Medicaid identification (ID) or by checking with the Medicaid Division in those cases where the ID is not available. After determining that the client is eligible, the broker must then determine if the trip requested is for a necessary medical service. If the trip is to a service with a regular medical provider at a typical medical site, the service is considered medically necessary. There are some exceptions which are documented in the "Medicaid Transportation Procedures" manual which is provided to each broker. If eligibility is in question, then the broker can contact either VPTA or the Department.

After eligibility is determined, the broker arranges a ride for the client. Of the 429,631 trips provided last year, 105,207 of them were provided by volunteer drivers. Volunteers are reimbursed at a rate of $0.30 per mile. The volunteer network is a source of pride for the program and is a major factor in the cost-effectiveness of the program. The brokers screen the volunteers to check current insurance and driving records. They also provide them with training. The volunteers are covered under the state's insurance while they are transporting clients as though they were state employees driving as part of their job duties. The remaining trips are provided by public transit services (which are typically provided by the broker agencies), taxis, private operators, and mileage reimbursement (in hardship cases). Hardship cases are those cases where the family has access to a vehicle, but the medical need is such that repeated trips of a long distance are necessary. The guidelines for hardship cases are that the recipient must travel more than a total of 50 miles each week to obtain treatment. Hardship reimbursement is at $0.16 per mile.

Trips and appointments are verified by the brokers. They are not required to verify each trip. Verification is done routinely by some brokers and only in questionable situations by other brokers.

Long distance trips need to be pre-approved and have a doctor's referral. The brokers call VPTA for approval for long distance trips which can be provided by volunteers, airlines, intercity buses, and rental cars. VPTA must get state approval if the patient will need to stay overnight in an out-of-state hospital.

Funding

Each broker submits a proposal annually which is the basis for the budget negotiations between the State, VPTA, and the broker. Each broker then has a transportation agreement with VPTA to provide a specified number of rides for a specified dollar amount based on the projections by the broker, VPTA, and the State. Six months into each year, the agreement is reviewed and modified to reflect the actual number of Medicaid rides provided.

All administrative expenses must be clearly documented, showing the budgeted expenses occurring. The broker's direct transportation costs are reimbursed at the usual and customary rates charged to the general public with the exception of volunteer car transportation, which is reimbursed at the Federal rate (currently $0.30 per mile).

Brokers submit claims to the State's fiscal agent (the EDS Corporation of Virginia) by modem or by floppy disk. Claims are submitted weekly by most of the brokers, and can be submitted weekly, every two weeks, or monthly. Copies of the claims must also be sent to VPTA by modem or floppy disk.

Brokers bill EDS for direct services and the loading fees. EDS pays VPTA and then VPTA pays the direct costs to the brokers as well as a large percentage of the loading fees. VPTA keeps a percentage of the loading fee for administration of the program. A new Medicaid Management Information System (MMIS) installed by EDS for claims processing now allows claims to be processed within two (2) weeks. Administrative costs are submitted monthly to VPTA. Brokers are required to pay carriers within 30 days after receipt of a verified invoice.

Administration

The program is administered by the VPTA. Each broker charges a loading fee for each trip arranged. The loading fee pays for the administration of the program. This loading fee is different for each agency, as it represents the administrative time spent by the agency for arranging the rides. The average loading fee for the program for FY 1995 was $3.15 per trip. The expenses covered from the loading fees include overall administrative support, computers and software, TDD equipment, management training, and driver training.

Each year each broker submits a proposal to VPTA which estimates the amount of funds that will be necessary to operate the program for the coming fiscal year. The proposals include an agency history, a description of the current service area, the actual proposal, for service (including revenues and expenditures), and a justification of request. These proposals help the State and VPTA to plan and budget for the amount of funds which will be necessary to carry out the program for the entire fiscal year.

Level of Administrative Effort

State. The state program staff is made up of one half-time position and a small fraction of the 22 regional staff workers. The state program manager has estimated that about two percent of the regional staff time is devoted to the transportation component of the Medicaid program. VPTA handles most of the administrative requirements for the program at a FY 1995 cost of $181,533, or $0.42 per trip. This cost is included in the total average $3.15 per trip loading fee.

Local. The local brokers administrative effort is reflected in their loading fees. The total administrative cost for the brokers was $924,872. The brokers' administrative cost appear high when compared to other states, but only because of the method of allocation. Vermont's brokers count the time it takes to arrange the ride as an administrative function, whereas some other states count any task which is involved with arranging the ride as a direct trip cost. Volunteer trips are also more time-consuming to arrange than traditional public transit and one-third of Vermont's trips are provided by volunteer drivers.

Records

Each broker maintains a separate account for the program which is called the VPTA Transit Account. All charges in the account need to be supported by properly executed invoices, agreements, or vouchers evidencing in proper detail the nature and propriety of the charges. All checks, invoices, agreements, vouchers, orders or other accounting documents pertaining to the program need to be clearly identified, readily accessible, and kept separate and apart from other such documents.

Brokers are required to retain all books, documents, papers, accounting records and other evidence pertaining to the costs incurred for work under the program for a least three years after payment of the final voucher.

Reporting

Each broker is required to submit monthly program reports, semi-annual peer program reviews, and other interim reports as required by VPTA.

MEDICAID TRANSPORTATION: PRE-VPTA

Prior to 1986, the State's Social and Rehabilitation Services (SRS) case workers were arranging rides for their Medicaid recipients. The caseworkers primarily relied on taxis and a few volunteers for client transportation. The transportation component of the program was haphazard in nature, with some areas of the State having no taxi service, and thus no transportation available for Medicaid recipients. The poor transportation resources available to the program sparked a legal aid interest in one of the communities. A Fair Hearing was held; the legal aid opinion was the program was being operated in an "arbitrary and capricious" manner because services were not available consistently throughout the State. The potential threat of a class action suit contributed to the initiation of significant changes in the program. The program was also subject to a Federal HCFA audit which indicated that the program did not comply with the HCFA standards concerning the transportation of Medicaid recipients.

As a result of the legal aid opinion and the HCFA audit, the program was transferred from the SRS to the DSW. The DSW was then approached by the VPTA with a proposal to manage the program for the State.

VPTA's first full year of operating the program was 1986-87. It provided about 80,000 trips in that first year. In FY 1994-95, VPTA brokers provided 429,631 trips for the program. The arrangement has allowed transportation to be available statewide to all Medicaid recipients who need it. Taxi operators have been supportive, since the new rides represent growth in the program and the steady level of taxi business has been maintained. The taxi operators in Vermont received $362,537 from the program in FY 1995.

KEY INNOVATIONS

Volunteer Network

The first innovative concept which characterizes the Vermont program is the magnitude of the volunteer network. Over 1,100 volunteers are available statewide to provide rides for the program. The volunteers are reimbursed by the program at a rate of $0.30 per mile. They also are provided with training and are covered under the State of Vermont employee liability insurance plan as though they were state employees while they are transporting clients. The brokers are very appreciative of the service provided by the volunteers and honor them frequently. The volunteers tend to be very proud of their efforts and take their responsibilities seriously.

Volunteerism is a common source of service for the brokers, as many of them have their roots in community action agencies. These agencies are skilled in recruiting volunteers -- they advertise, pass the word along, and use the peer pressure to help keep the volunteer network viable. The use of volunteers is a very cost-effective solution for rural areas where public transportation and taxis are not feasible or available at an acceptable cost.

VPTA Brokerage

The second innovative concept of the Vermont program is the use of the statewide transportation association to administer the Medicaid transportation program. In Vermont, it has been a good partnership for both the State and the VPTA. For VPTA, it has strengthened its members and provided a sound base of ridership. The Medicaid revenue allows the brokers to spread their overhead rate over more services, for the benefit of all of the services. They can provide more public transportation with their greater resources. In the VPTA, brokers also have a source for training and technical assistance.

For the State, the partnership has allowed the program to grow without increasing State staff.

SUMMARY

In the eight (8) program years for which data is available, Vermont's Medicaid transportation program has grown from 80,000 trips per year to almost 430,000 trips per year. The average cost per trip for FY 1995 was $6.99. The program growth was possible through an innovative arrangement by which the state public transportation association

administers the program by using 10 local brokers (consolidated to nine (9) in FY 1996) who make extensive use of volunteer drivers. A combination of factors makes the program a success and keeps the cost reasonable. The factors include:

- Extensive use of volunteer drivers;
- Experienced transportation providers administering the program;
- Program monitoring; and
- Staff support between the brokers and VPTA and between the DSW and VPTA.

Despite the continued success of VPTA's Medicaid program and increasing cost effectiveness, the future of the program is unclear. Proposed federal cutbacks in funding coupled with likely state cutbacks could jeopardize a transportation program that has proven its worth and continues to demonstrate improvement in productivity and performance.

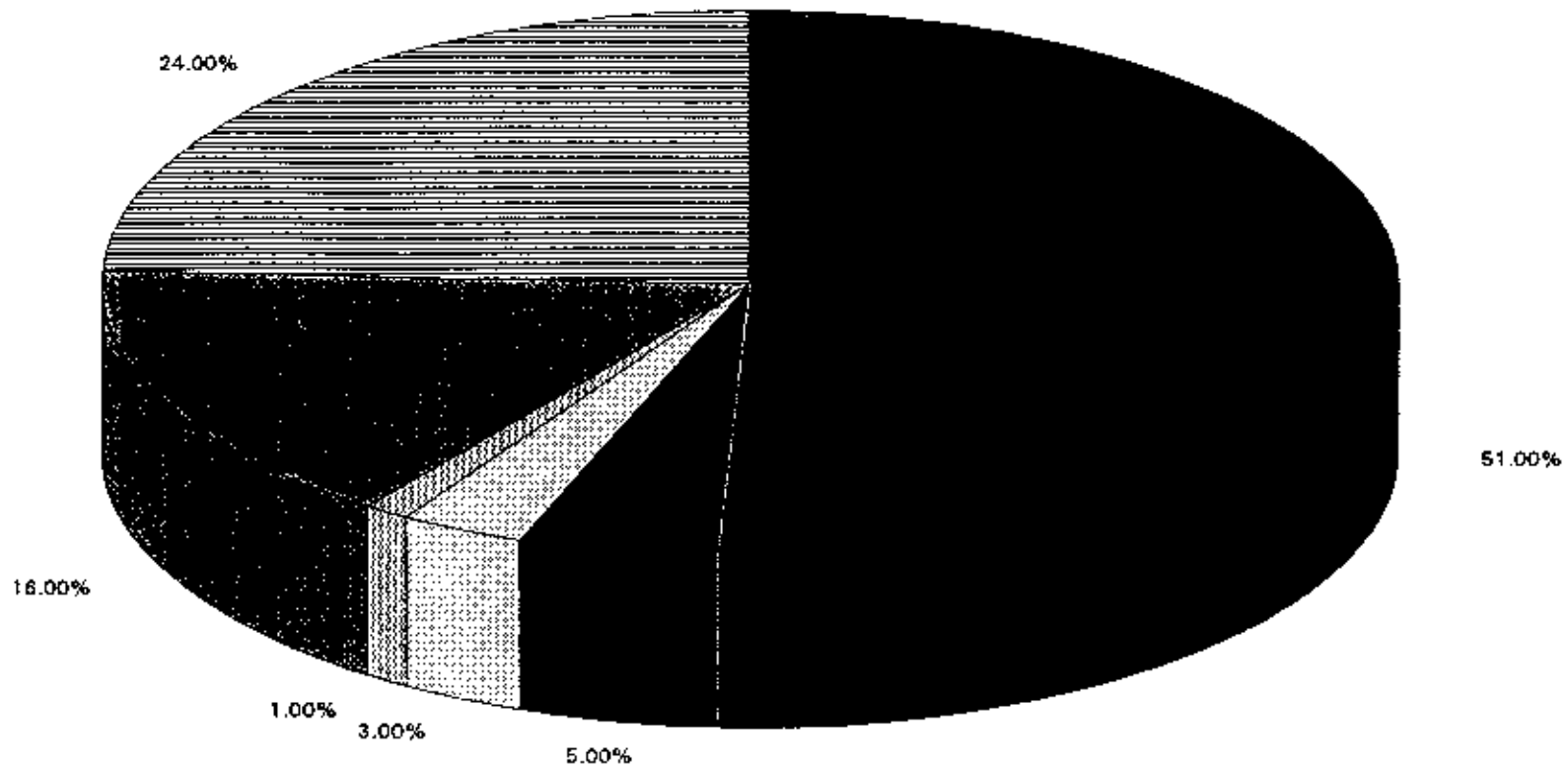
The future funding picture, both short term and long term, appears cloudy, but VPTA and its member organizations are committed to carrying on an important transportation program that is vital to thousands of Vermonters. Currently, although not knowing what the future may bring, the VPTA is exploring alternative funding mechanisms that may be available, particularly at the state level, to offset any funding reductions for Medicaid transportation services as well as public transportation in general.

FY 1995 MEDICAID TRANSPORTATION
MODE OF TRAVEL

	MILES	TRIPS	COST
VOLUNTEERS	3,508,521	105,207	963,156.83
TAXI	N/A	69,358	362,537.30
BUS	N/A	218,375	562,211.13
VAN	N/A	2,207	17,866.05
HARDSHIP	510,702	12,187	81,678.90
OTHER	N/A	22,297	103,028.64
TOTAL	4,019,223	429,631	2,090,478.85

N/A: Costs for these modes based on trips not miles.

MEDICAID TRANSPORTATION
MODE OF TRAVEL



1. Bus 51%; 2. Volunteers 24%; 3.Taxi 16% ; 4. Other 5%; 5. Hardship 3%; 6. Vans 1%

MEDICAID PASSENGER TRIP GROWTH
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
1987
1988
1989
1990
1991
1992
1993
1994
1995
80909
139513
171021
216113
266432
342326
369599
339592
427806

Concurrent Session #4
2. Disaster Recovery

Barry Mosley
Transportation Planner
Albany/Dougherty County
Planning Commission
Albany, GA

Albany's Great Flood of 1994
&
Albany Transit System's
Role In Disaster Relief

The City of Albany, Georgia, was hit by a 500 year flood on July 7, 1994. We are here to:

- Provide You With A General Overview Of The Flood
- Detail Albany Transit's Role In Disaster Relief
- Review Current Emergency Action Plans

On July 4, 1994, hurricane Alberto hit Northern Florida. The storm was a Category One (1) hurricane, that carried heavy rains. As Alberto slowly moved inland and was down graded to a tropical storm, the rain squalls continued to provide rain fall of over 20 inches to northern Florida and southern Georgia. By July 6, 1994, the storm system had moved into Central Georgia. The constant precipitation lead to ground saturation and swelling of the Flint River system.

The Flint River is Georgia's pre-dominant river and the majority of Georgia's tributaries flow into this river system. This spelled eminent danger for the cities and towns in the Flint River basin.

Although the storm provided substantial rain to the region, the swiftness of the rising river caught many off-guard. Small towns like Montezuma and Oglethorpe were totally submerged, and cities like Americus and Albany lay in the path of destruction.

Albany and the surrounding areas experienced street flooding from Alberto's rain. This was not an uncommon occurrence for "The Good Life City." Heavy rain occurs in this part of the South regularly. Albany residents have become accustom to minor flooding. The Flint River's waters often over flow its banks when the river crest during the Spring. This time was to be very different.

By midday on July 7, 1994, water began to slowly top the banks of the Flint River. Earlier, the City's Police and Fire Departments began to warn and evacuate citizens from the areas adjacent to the river. The areas of primary concern were in South Albany neighborhoods, and along Radium Springs Road, where Albany State College is located. Another major facility, the Albany Civic Center, was also in the path of the rising river. City crews and volunteers began working feverishly to surround the Civic Center with sand bags. This site was to soon become an icon of how hard the City and its citizens were to work to save the city.

Shelters were established at local schools and churches:

Albany Area Flood Shelters

Doughtery High School
Porterfield Church
Albany High School
Victory Tabernacle
First Assembly
Southside Middle School
Magnolia Elementary School
Westover High School

Other emergency preparedness measures began to take shape. Albany Transit buses began picking-up evacuees at designated parking lots to transport them to shelter sites.

The Emergency Operations Center (EOC) was opened, an served as the command center for flood operations.

Although citizens had been warned, and some did evacuate, a large number of people did not leave the areas where the water was predicted to hit the hardest. Their logic, previous experiences, and the conditions outside their homes lead them to believe that they could remain in their homes and "ride out the flood." By 4:00 p.m., between three (3) and five (5) feet of water was in the affected areas. People had to be evacuated in boats provided by the Georgia Department of Natural Resources and the Marine Corps Logistics Base, which is located in Albany. By midnight, many parts of South Albany had seven (7) to ten (10) feet of water in them. By now it was an emergency situation.

The City of Albany was divided by the Flint River's flood waters. A state of emergency was declared. Citizens on the west side of the Flint River were surrounded by the flood waters by 9:00 p.m. The transportation network was severed. For four (4) days, movement across the river only occurred by helicopter.

"Marshall Law" was declared and a dust to dawn curfew was put in place. Georgia's Governor, Zell Miller, sent the National Guard in to assist in patrolling neighborhoods. The Georgia State Patrol and police from across Georgia and Northern Florida also came to Albany to assist in law enforcement.

President Clinton declared Southwest Georgia, Northwest Florida, and parts of Southeast Alabama disaster areas.

After four (4) days of isolation, some roads were re-opened. Travel from the east side of town to the west side took approximately two (2) hours. Highway 82, which crosses the Flint River was closed, as well as, the Broad Street and Oakridge Drive bridges. Interstate 75 was closed, and traffic was re-routed via Interstate 16 and other highways back to Interstate 75. **(See Map)**

ATS's Flood Response

ATS deployed buses on both sides of the river to assist in emergency transportation. Four (4) buses were placed on the east side of the river and five (5) on the west side of the river. The vehicles on the east side ferried emergency medical personnel from helicopters to East Albany Medical Center and Dougherty High School. Additionally, ATS staff transferred evacuees to other shelters on the east side, as more shelters opened.

Staff deployed on the west side of the river moved the majority of evacuees from the edge of their neighborhoods to shelters. These evacuees were brought to the buses by boat. Staff worked round the clock to help the citizens of Albany, "with little regard for their personal safety."

Several Georgia transit operations were contacted and asked to provided emergency assistance. **MARTA** from **Atlanta** and **METRA** from **Columbus, GA** responded. MARTA sent four (4) buses and METRA sent six (6) buses. Both sets of vehicles arrived on July 13, 1994. The four (4) vehicles from MATRA were placed on the east side of the river and the six (6) METRA vehicles on the west side. These vehicles supplemented the operations that were previously described. We were able to use MARTA's buses for 15 days (7/13/94 -- 7/27/94) and METRA's buses for 23 days (7/13/94 -- 8/4/94). Without their assistance, our emergency shuttle operations would have been severely hampered, due to ATS vehicle break downs.

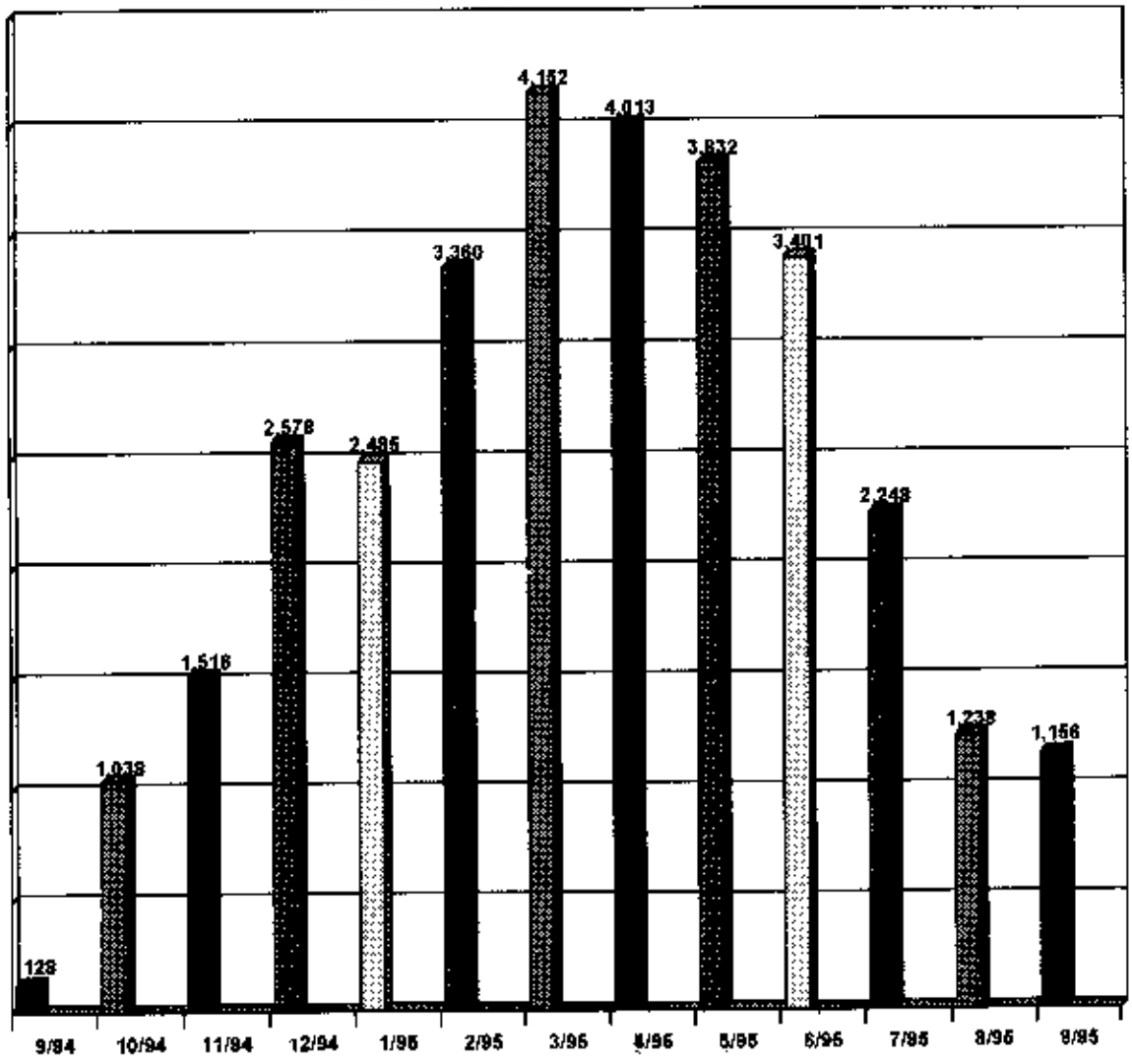
As flood waters started to recede, the Broad Avenue Bridge and the Oglethorpe Bridge (Highway 82) were opened to walking traffic. ATS adjusted its shuttle service to accommodate the bridge openings. Routes were set-up to bring citizens to major employment centers: Procter and Gamble, Cooper Tires, Miller Brewing, Merk Chemical Co., etc. The majority of fixed route service was restored by September 4, 1994. The Blue and Orange routes had to be detoured because of flood damage.

Post Flood Operations

Albany Transit System is playing a significant role in floor recovery efforts by providing shuttle service to residences living in FEMA trailer parks to our fixed route lines.

ATS has provided over **31,000** passenger trips to and from the FEMA Trailer Parks

FEMA PASSENGER TRIPS
SEPT. 1994 --SEPT. 1995

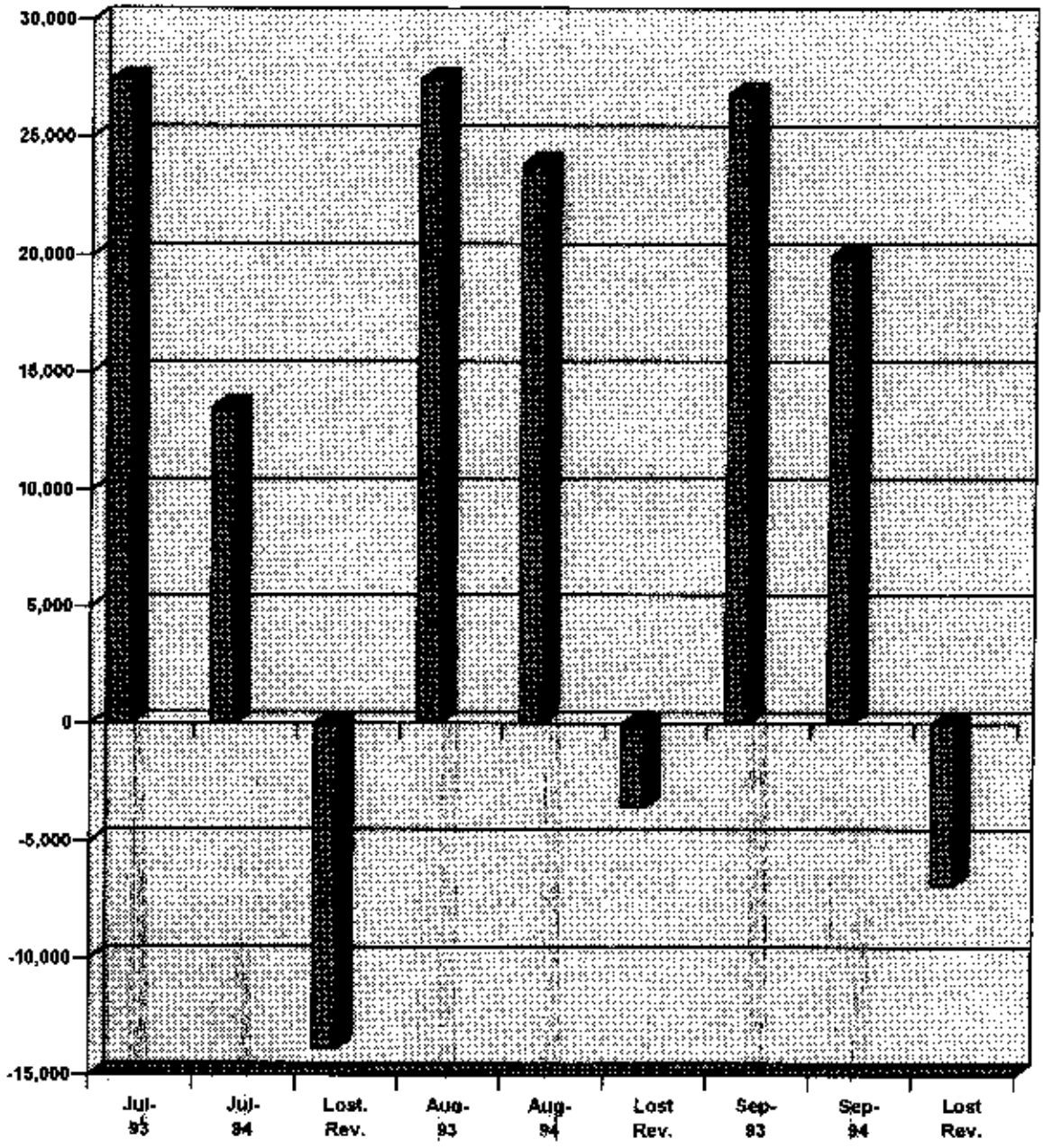


Between September 1994 and July 1995, we provided service to six (6) FEMA Trailer Parks utilizing three (3) fifteen passenger vans and one (1) fixed route line, that was extend to a trailer park to provide service to residents. We have been able to reduce the level of service to the trailer parks as people moved back into their homes. We currently service five (5) trailer parks with two (2) fifteen passenger and have reduced the hours of operation.

Since September 1994, we have incurred over $58,350 in operator salaries and $83,500 in vehicle leasing cost. These costs have been reimbursed by FEMA.

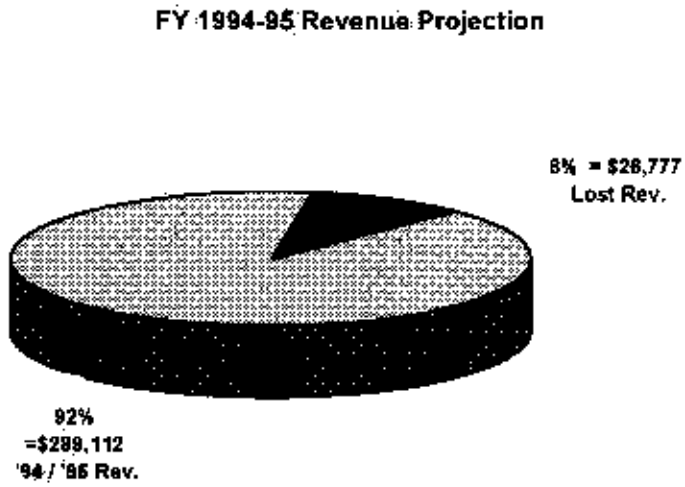
The flood also affected *ATS's* revenue. Our **FY 94/95 revenue** was **$289,112**. When compared to the previous **FY 93/94** total of **$315,889**, the annual loss was **$26,777**. Our revenue losses were particularly heavy during the three (3) months following the flood.

REVENUE COMPARISONS
(JULY 93/94 AUG. 93/94 SEPT. 93/94)



The estimated lost revenue for the three (3) months after the flood totaled **$24,291.** This figure **represents 92% of the FY 94/95 lost revenue total**.

The FY 94/95 lost revenue equaled 8.5% of the previous year's revenue (FY 93/94– $315,889).



ATS continues to operate service in the communities that were hit hardest by the flood. The line that was most affected is the "Blue Line/MLK" route. This portion of the "Blue Line" provides service to citizens living in the heart of South Albany. A 1993 study done by ATE Management Services Company, shows the "Blue Line" generates 36.8% of the system's revenue.

Two (2) other lines operated in South Central Albany. The "Green Line/Carver Park" route services the southwestern section of Albany. The "Yellow Line/ Carver Park North" leg provides service in South Albany, to the Carver Park North area.

Some of the major passenger destinations in this area are: Albany Technical Institute, the retail and light industrial corridor along Slappey Blvd., the State Health Department, and Monroe High School.

The area serviced by the "Red Line/Albany State" route was heavily affected by the flood. The "Red Line" services Albany State College and the "Four Points" area of the City.

This disaster was a learning experience. Although government agencies responded in a magnificent fashion, "Emergency Action Plans" for agencies like Albany Transit System had not been developed. The City Manager has subsequently instructed Department Heads to prepare Emergency Actions Plans, not only floods, but for other natural and "man made" disasters.

The following is ATS's Emergency Action Plan for flood emergencies. We have developed similar plans for hurricanes, tornadoes, and chemical spills/accidents. We have copies of these plans for your review

Albany Transit System

Emergency Action Plans

Preface

The City of Albany and Doughtery County work closely to coordinate their "emergency action plan" responses. The City Manager and County Administrator coordinate the City and County's effort through the Emergency Management Organization (EMO).

EMO Officials meet to coordinate pending emergency actions. Two (2) operating units are set-up to coordinate **Internal Operations** and **Public Information**.

The City's Fire Chief provides instructions to Albany Transit System's General Manager on when to implement various parts of ATS's action plan. ATS's General Manager is responsible for the coordination and execution of all of ATS's emergency action plans.

The agency with primary responsibility for transporting evacuees is Doughtery County School Board's Transportation Division. ATS vehicles are to be used for secondary responses. Although ATS has secondary responsibilities, ATS management prepares as though it has primary responsibilities.

Albany Transit System
Emergency Action Plan

1. Flood: Precautions

1.1. Inform key employees that emergency flood preparedness measures are to be taken.

1.2 Determine when fixed route and paratransit services need to end.

1.3 Have key employees take care of family and home preparedness needs, and return to the office to secure and prepare the administration and maintenance facilities for emergency operations.

1.4 Inform all employees that a state of "emergency preparedness" has been declared.

1.5 Have employees that were on duty, who did not have a chance to take care of family and home preparedness needs, to do so. Inform them that after they take care of these needs, they are on "stand-by" and could be called back to the Administrative/Maintenance facility to evacuate citizens.

1.6 Contact employees that were not on duty and tell them that a state of "emergency" has been declared. Instruct employees to take care of family and home preparedness needs. Inform them that after they take care of these needs, they are on stand-by, and could be called to the Administrative/Maintenance facility to evacuate citizens.

1.7 Check emergency supplies:

- Flash Lights
- Extra Batteries
- Bottled Water
- First Aid Kits
- Food Rations
- Battery Powered Radio/TV
- Fire Extinguisher
- Masking Tape
- Rope

1.8 Fuel all vehicles that are not in service. Re-fuel all fixed route buses and paratransit vans when they come "out of service."

1.9 Unplug electrical equipment that is not essential to emergency operations. (Unplug essential equipment when and if evacuation of Administration/Maintenance facilities is necessary.)

1.10 Move electrical equipment and files to storage attic.

1.11 Shut off (or be in a position to shut off) utilities, e.g., gas, water, and electrical utilities. (Shut-off at electrical breakers)

1.12 Measure Under Ground Storage Tanks (UST) fuel levels. Fill tanks with fuel (if possible). Monitor UST's as prescribed in UST "monitoring procedures."

1.13 Secure objects that could be washed away.

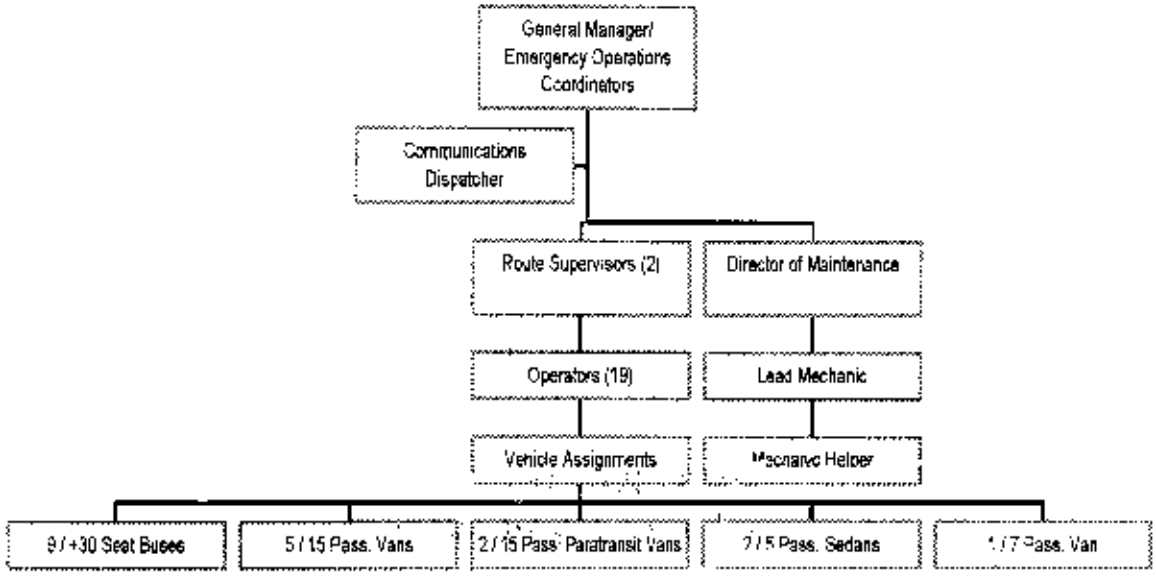
1.14 Identify local shelters via Fire Chief and local EMO.

1.15 Identify vehicle storage areas on both sides of the Flint River, in case the Administrative/Maintenance facilities are flooded or become inoperable.

1.16 Contact the necessary number of employees needed to respond to evacuation operations.

1.17 Prepare to shuttle evacuees from flood prone areas.

ATS Emergency Operations Plan Organizational Chart



1.2 Flood: Response

1.2.1 When instructed by Fire Chef, dispatch vehicles to designated pick-up points. Bring evacuees to designated shelters. (Monitor radio transmissions.)

1.2.2 Inform EMO via Fire Chief that evacuation operations have begun.

1.2.3 Continue monitoring local weather reports and conditions around Administrative/Maintenance facilities.

1.2.4 Continue UST monitoring procedures.

1.2.5 Monitor area water levels via operators' radio transmissions and EMO communications.

1.2.6 Determine when evacuation operations will end. Determine when personnel and vehicles would return to safety.

1.2.7 Complete evacuation operations. Return personnel and vehicles to safety

1.2.8 If vehicles can return to the Administrative/Maintenance facilities, vehicle inspections will be conducted by maintenance staff.

1.2.9 **If necessary, evacuate Administrative/Maintenance facilities. Before leaving, a review of precautionary measures shall be conducted. Personnel will be moved into the EMO headquarters. Personnel conducting evacuations would be picked-up at pre-determined locations (2) outside the flooded areas. Vehicles will be stored at these pre-determined areas. Personnel will be housed in local shelters, if necessary, or return home if possible.**

1.3. Post Flood Response

1.3.1 ATS will assist in post flood shuttle operations. Evacuees will be brought home to assess any damage and brought back to shelters.

1.3.2 An assessment of how the flood will affect fixed route and paratransit service will be conducted.

1.3.3 Vehicles will be inspected for damage.

1.3.4 An assessment of damage (if any) to Administrative/Maintenance facilities will be conducted.

1.3.5 UST fuel levels will be measured and inspected for contamination.

1.3.6 Utilities will be checked and turned back on. ATS will contact Water, Gas, and Light Commission (local utility company) if any problems are sighted.

2. Hurricane: Precautions

2.1. Inform key employees that emergency storm preparedness measures are to be taken.

2.2 Determine when fixed route and paratransit services need to end.

2.3 Have key employees take care of family and home preparedness needs, and return to the office to secure and prepare the administration and maintenance facilities for emergency operations.

2.4 Inform all employees that a state of "emergency preparedness" has been declared.

2.5 Have employees that were on duty, who did not have a chance to take care of family and home preparedness needs, to do so. Inform them that after they take care of these needs, they are on "stand-by" and could be called back to the Administrative/Maintenance facility to evacuate citizens.

2.6 Contact employees that were not on duty and tell them that a state of "emergency" has been declared. Instruct employees to take care of family and home preparedness needs. Inform them that after they take care of these needs, they are on stand-by, and could be called to the Administrative/Maintenance facility to evacuate citizens.

2.7 Check emergency supplies:

- Flash Lights
- Extra Batteries
- Bottled Water
- First Aid Kits
- Food Rations
- Battery Powered Radio/TV
- Fire Extinguisher
- Masking Tape
- Rope

2.8 Fuel all vehicles that are not in service. Re-fuel all fixed route buses and paratransit vans when they come "out of service."

2.9 Unplug electrical equipment that is not essential to emergency operations. (Unplug essential equipment when and if evacuation of Administration/Maintenance facilities is necessary.)

2.10 Move electrical equipment and files to storage attic.

2.11 Shut off (or be in a position to shut off) utilities, e.g., gas, water, and electrical utilities. (Shut-off at electrical breakers)

2.12 Measure Under Ground Storage Tanks (UST) fuel levels. Fill tanks with fuel (if possible). Monitor UST's as prescribed in UST "monitoring procedures."

2.13 Secure objects that could be washed or blown away.

2.14 Tape windows in Administrative/Maintenance facilities.

2.15 Identify local shelters via Fire Chief and local EMO.

2.16 Identify vehicle storage areas on both sides of the Flint River, in case the Administrative/Maintenance facilities become inoperable.

2.17 Contact the necessary number of employees needed to respond to evacuation operations. (See previous organizational chart.)

2.18 Prepare to shuttle evacuees from flood prone areas.

2.2 Hurricane: Response

2.2.1 When instructed by Fire Chef, dispatch vehicles to designated pick-up points. Bring evacuees to designated shelters. (Monitor radio transmissions.)

2.2.2 Inform EMO via Fire Chief that evacuation operations have begun.

2.2.3 Continue monitoring local weather reports and conditions around Administrative/Maintenance facilities.

2.2.4 Continue UST monitoring procedures.

2.2.5 Monitor area water levels and wind damage via operators' radio transmissions and EMO communications.

2.2.6 Determine when evacuation operations will end. Determine when personnel and vehicles would return to safety.

2.2.7 Complete evacuation operations. Return personnel and vehicles to safety.

2.2.8 If vehicles can return to the Administrative/Maintenance facilities, vehicle inspections will be conducted by maintenance staff.

2.2.9 **If necessary, evacuate Administrative/Maintenance facilities. Before leaving, a review of precautionary measures shall be conducted. Personnel will be moved into the EMO headquarters. Personnel conducting evacuations would be picked-up at pre-determined locations (2). Vehicles would be stored at these re-determined areas. Personnel will be housed in local shelters, if necessary, or return home if possible.**

2.3. Post Hurricane Response

2.3.1 ATS will assist in post hurricane shuttle operations. Evacuees will be brought home to assess any damage and brought back to shelters.

2.3.2 An assessment of how the storm has affected the delivery of fixed route and paratransit service will be conducted.

2.3.3 Vehicles will be inspected for damage.

2.3.4 An assessment of damage to Administrative/Maintenance facilities will be conducted.

2.3.5 UST fuel levels will be measured and inspected for contamination.

2.3.6 Utilities will be checked and turned back on. ATS will contact Water, Gas, and Light Commission (local utility company) if any problems are sighted.

3. Tornado Precautions

3.1. Inform key employees that a tornado warning is in effect and to take emergency preparedness measures.

3.2 Determine if fixed route and paratransit services need to be interrupted.

3.3 Inform all employees that a tornado warning is in effect.

3.4 Check emergency supplies:

- Flash Lights
- Extra Batteries
- First Aid Kits
- Battery Powered Radio/TV
- Fire Extinguisher
- Masking Tape
- Rope

3.5 Fuel all vehicles that are not in service.

3.6 Unplug electrical equipment that is not essential to emergency operations.

3.7 Shut off (or be in a position to shut off) utilities, e.g., gas, water, and electrical utilities. (Shut-off at electrical breakers)

3.8 Measure Under Ground Storage Tanks (UST) fuel levels. Fill tanks with fuel (if possible). Monitor UST's as prescribed in UST "monitoring procedures."

3.9 Secure objects that could be blown away.

3.2 Tornado Response

3.2.1 If an tornado strikes, the Fire Chef shall inform ATS's General Manager on where to dispatch vehicles to pick-up evacuees. The evacuees will be brought to designated shelters. (Monitor radio transmissions.)

3.2.2 ATS's General manager shall identify the necessary number of employees needed to respond to evacuation operations.

3.2.3 Prepare to shuttle evacuees from storm damaged areas.

3.2.4 Inform Fire Chief that evacuation operations have begun.

3.2.5 Continue monitoring local weather reports and conditions around Administrative/Maintenance facilities.

3.2.6 Monitor area wind damage via operators' radio transmissions and EMO communications.

3.2.7 Continue UST monitoring procedures.

3.2.8 Determine when evacuation operations will end. Determine when personnel and vehicles can return to safety.

3.2.9 Complete evacuation operations and return personnel and vehicles to safety.

3.2.10 When vehicles return to the Administrative/Maintenance facilities, vehicle inspections will be conducted by maintenance staff.

3.2.11 **If a tornado strikes the Administrative/Maintenance facilities, staff will take shelter in the maintenance building's parts room . This room has no windows and is on the ground floor.**

3.3. Post Tornado Response

3.3.1 ATS will assist in post tornado shuttle operations. Evacuees will be brought home to assess any damage and brought back to shelters.

3.3.2 An assessment of how the storm has affected the delivery of fixed route and paratransit service will be conducted.

3.3.3 Vehicles will be inspected for damage.

3.3.4 An assessment of damage to Administrative/Maintenance facilities will be conducted

3.3.5 UST fuel levels will be measured and inspected for contamination.

3.3.6 Utilities will be checked and turned back on. ATS will contact Water, Gas, and Light Commission (local utility company) if any problems are sighted.

3.3.7 **In the event a tornado strikes the Administrative/Maintenance facilities, a hazardous materials unit will be asked to come in and inspect the site. UST will be examined for leaks and damage.**

4. Chemical Disaster & Accident Responses

4.1 Determine if fixed route and paratransit services need to be interrupted.

4.2 Inform all employees of the nature of the disaster.

4.3 If **chemical disaster** or **major accident** occurs, the Fire Chief/EMO shall inform ATS's General Manager on where to dispatch vehicles to pick-up evacuees or victims. The evacuees will be brought to designated shelters or emergency facilities. (Monitor radio transmissions.)

If at night, the General Manager will notify the Route Supervisors and have them meet the General Manager at the Administrative/Maintenance facility. They will drive the emergency evacuation vehicles.

4.4 Prepare to shuttle evacuees from affected areas.

4.5 Inform **EMO** that evacuation operations have begun.

4.6 Monitor radio transmissions and **EMO** communications.

4.7 Determine when evacuation operations will end; and when personnel and vehicles can return to safety.

4.8 Complete evacuation operations. Return personnel and vehicles to safety.

4.9 When vehicles return to the Administrative/Maintenance facilities, vehicle inspections will be conducted by maintenance staff.

Concurrent Session #4
3. Implementation of ADA

Update on ADA and Intercity Buses

Fred Fravel
KFH Group, Inc.

ADA Implementation: One State's Experience

Peter H. Hallock
Iowa Department of Transportation

Twelfth National Conference
Rural Public and Intercity Transportation
October 22-25, 1995, Des Moines, Iowa

Update on ADA and Intercity Buses
by
Fred Fravel, KFH Group, Inc.

Under the Americans with Disabilities Act (ADA), the U.S. Department of Transportation (DOT) is required to develop regulations to implement the Act. The ADA was signed into law in 1991, and regulations to implement the public transportation requirements were issued by the DOT in September, 1991, with one major exception--regulations covering private operators of over-the-road coaches (OTRBs)[1].

During the passage of the ADA, the private operators of OTRBs (defined as the large high-deck coaches, typically rear-engined, with baggage compartments below the passenger floor level) had made known their concerns about the possible cost impacts on this essentially unsubsidized industry. As a result, Section 305 of the ADA called upon the Office of Technology Assessment (OTA) of the U.S. Congress to perform a study of the available technology for providing accessibility on OTRBs, the costs, and the likely demand. The statute required the OTA report by May of 1993, and DOT was given a year following that report to develop implementing regulations. The regulations were to take effect in July of 1996 for large carriers, and a year later for small carriers.

The OTA report[2] was completed on schedule in May of 1993, and the DOT issued an Advanced Notice of Proposed Rulemaking (ANPRM) in October of that year, soliciting comment. In November, a workshop was held by DOT for industry representatives and disability advocacy groups. The DOT staff expressed a number of concerns with the OTA report, and was seeking additional input.

The OTA had taken the position that under the ADA accessibility required that a wheelchair user be accommodated without having to transfer from his or her own wheelchair, and that equivalent service requirements would mean that a wheelchair user could not be required to make advance reservations if they were not generally required for all passengers. OTA estimated the life-cycle cost of equipping OTRBs to make them fully accessible, including staff training and maintenance, at approximately 1 percent of the total life cycle cost of operating the vehicle. The DOT has concerns that the OTA interpretation of ADA requirements are too inflexible, the cost estimates are too low, and the OTA estimates of demand are too high.

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[1]It should be noted that private entities operating vehicles other than OTRBs are covered by the September 1991 regulations.

[2]U.S. Congress, Office of Technology Assessment, Access to Over-the-Road Buses for Persons with Disabilities, OTA-SET-547 (Washington, DC: U.S. Government Printing Office, May 1993).

The expected Notice of Proposed Rule Making (NPRM), and Final Rules, due by May of 1994, have not appeared. In May of 1995, DOT issued an information notice in the Federal Register,[3] presenting several of its concerns with the OTA approach, and outlining three options:

Option I: **100 percent of all new OTRBs would be lift-equipped**, with securement positions allowing wheelchair users to remain in their own mobility devices. Persons requiring the use of accessibility features would not be required to make advance reservations (which are not required generally of regular-route intercity bus users). DOT estimates annual costs of $67 - 78 million.

Option II: **Access would be provided primarily through the use of station-based s or ramps. 100 percent of OTRBs would be equipped with boarding chairs,** or alternatively with powered stair-climbing devices called Scalamobiles. Wheelchair users would have to transfer from their own chairs to the boarding chair, and then to a seat on the coach. DOT estimates annual costs of $16 - 19 million.

Option III: **Twenty-five percent of all new OTRBs would be lift-or ramp- equipped with tie-downs, and the remaining 75 percent would be equipped with Scalamobiles**. Wheelchair users desiring to remain in their own chair would be required to make advance reservations to use the lift- equipped coaches, while those will to transfer could travel without advance reservations. DOT estimates annual costs of $40-45 million.

In general, disability groups favor Option I, and DOT cites some bus industry support for Option III. The next step in this process remains the issuance of an NPRM.

In addition to the developments (or lack of them) at the DOT, it should be noted that in the interval following the issuance of the interim DOT regulations, Project ACTION has funded several projects dealing with the private sector and ADA implementation, including the development of a reference guide and training. The ADA Private Transportation Handbook is available from Project ACTION[4], and it should be obtained by any private transportation operator wishing to come into compliance.

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[3]Federal Register, Volume 60, No. 88, May 8, 1995: Unified Agenda, 2197 Transportation for Individuals with Disabilities (Over the Road Buses).

[4]Project ACTION, 1350 New York Avenue, N.W., Suite 613, Washington, DC 20005; 202-347-3066 (Voice/TTY) or 800-659-6428.

ADA IMPLEMENTATION:
One State's Experience

Peter H. Hallock
Iowa Department of Transportation

In July of 1990 the President, with much fanfare, signed the Americans with Disabilities Act. The "Act," generally referred to as the "ADA," required some major changes in American society in order to provide persons with disabilities the civil right of equal access to all aspects of that society. Public transit was one element of American society which was particularly singled out for changes.

Where We Were

While transit in Iowa had a history of working with persons with disabilities, the previous efforts had typically been very limited and never on an across-the-board basis. Our larger urban systems, based on federal requirements, had put in place small specialized alternative transportation programs for persons with disabilities, but all regular service route buses were being bought with no access features. Even units bought back in the late seventies and early eighties when wheelchair lifts had been required had had their lifts bolted down.

Among our small urban systems, most again were offering a very limited system of wheelchair lift equipped alternative transportation, and several had some route buses with working lifts. One small urban system was operating with mostly accessible route service, but no alternative service.

Iowa's regional transit systems were serving a lot of persons with disabilities, particularly under client contracts with sheltered workshops. In fact about 40% of their fleet vehicles had lifts, and these would operate open to the public, but it was not all uncommon that popular services would be offered with only non-accessible vehicles for the sake of efficiency and persons asking for access to such services might be told it was too costly.

Even when vehicles were bought with lifts, they were designed to transport the wheelchairs facing sideways rather than forward because it was cheaper that way even though there was knowledge that forward facing orientation was safer.

Where We Are

Over the last five years there has been significant progress. Most of the small urban route buses either are accessible or will be as vehicles currently on order are delivered. Most of the small urban systems are also in full compliance with the ADA paratransit requirements.

Our 16 regional systems now operate a mix of vehicles including about a third equipped to ADA standards, a third with pre-ADA lifts and a third without any special access features. They have developed vehicle assignment plans/ policies intended to assure that any person with a disability will have the same chance to obtain a ride in a vehicle they can use as a non-disabled person does.

Even among our large urban transit systems, several are now in full compliance with the ADA paratransit requirements and most have made significant progress towards making their fixed-route systems accessible.

What We Did

As I look back at our progress, I'd say the primary credit has to go to the local transit agencies which bought the ADA accessible vehicles and put the new accessible service plans into effect. I do feel, however, that some of the things we did as a state had a significant impact. I'd say there were seven key things that our department did which contributed.

Policy/Commitment

Most important, I would say, was the Iowa Office of Public transportation's adoption of a policy or commitment to embrace the spirit of the ADA and to work toward full implementation. This wasn't that easy. There was widespread

sentiment that the ADA represented a "federal dictate" overriding the local decisions made previously as to how best to serve persons with disabilities, and that this was one more "unfunded mandate" put in place in response to "special interests." Some held that, if we bided our time, Congress would reverse itself and abolish the requirements. It seemed that even official communications were offering ways to circumvent aspects of the rules, by changing to from fixed routes to route deviation and by signing a simple certification of system accessibility.

Instead we decided to buy into the full concept of ADA and not just the minimum effort that might be required to meet the letter of the rules. For some of us it had to do with a personal philosophy that public transit should indeed be open to all members of the public. For others it may have been based on a politically realistic assessment of what was best for Iowa's public transit industry. Senator Harkin of Iowa had been a primary sponsor of the ADA, and even those who might not be in full agreement with the ADA's requirements could agree that Senator Harkin was a friend that we wanted to keep.

Education

Once we decided to embrace the ADA rather than to resist it, we realized that we had a lot of educating to do, both within the transit industry and with the public. We didn't waste any time. Even as the final rule came out in September, 1991, we were organizing a major training workshop for transit operators to be held that November. National experts were brought in to explain the ADA rules from the perspective of those who had been personally involved in their development. We also had state officials presenting how we intended to implement the rules and what we saw as the benefits of an aggressive implementation policy.

Our educational effort didn't end there. We offered a traveling show which was presented with slight variations to transit boards and to citizen groups and groups advocating for persons with disabilities. In many cases we spoke in conjunction with representatives from our state department of Human Rights. We would address how the ADA affects public transit, partly to emphasize our commitment to implementation of the ADA, but also partly to correct unrealistic expectations due to the "overselling" of the ADA among persons with disabilities. We would explain that ADA meant equal access to available transit, but that it didn't mean persons with disabilities would suddenly have service evenings and weekends where such didn't exist for anyone else.

Program Enforcement

A major element of our ADA policy was addressed through state-wide programming of federal capital funds. Vehicles needed for implementation of ADA paratransit services were given top priority for capital funding under the Section 16 and 18 programs as well as for our Section 3 state-wide program. We made a assessment that none of our demand responsive systems could legitimately certify to program accessibility without at least some vehicles in their fleet meeting the ADA accessibility standards. We therefore would not consider the programming of new non-ADA vehicles for the first two years following the issuance of the rules. After that point, we required demand-responsive systems to present a vehicle assignment plan/policy which addressed how the system would meet a request for ADA accessibility within any of its services, before we would accept a certification of program accessibility.

Program Incentives

We tried to neutralize or even reverse the local opposition to ADA-vehicles based on their higher costs. We pursued improvements that would reduce the loss of passenger capacity involved in adding ADA features to a vehicle – I'll address some of those later. At the same time, we took advantage of the differential in federal participation levels which FTA allows on new ADA-equipped vehicles.

While a change from 80% federal share on non-ADA vehicles to 83% federal share on ADA-equipped vehicles may seem insignificant, if we look at the impact on the local share dollars required for a medium-sized light duty (or van cutaway) bus, we see that it can be quite meaningful. The non-ADA version of this vehicle, traditional known here in Iowa as a 21-passenger bus, costs about $45,000. With an 80% federal share that means the local system must come up with $9,000 in matching funds. The ADA version of the vehicle costs about $50,000, but, with an 83% federal share, it requires only $8,500 in matching funds. While we don't see this differential directly inducing people to

purchase the ADA version, we do feel that it has helped considerably in gaining acceptance of our state's strong position in support of ADA implementation in the transit industry.

Spec Enforcement

Just programming ADA Vehicles isn't enough. We found that it takes a fair amount of work and vigilance to be sure that what gets delivered does indeed comply with the ADA specifications. In Iowa procurement of equipment is done by the local transit systems, either individually or, more commonly, as consortiums based on either geographic location or types of vehicles sought. Iowa DOT staff work with the individual transit manager or the leader of a consortium in the development and approval of procurement specifications. With the ADA, we paid particular attention to making sure the ADA requirements were properly included in the specs and weren't adversely affected by any allowance made as part of the exceptions and equals process.

We also offer assistance in inspection of equipment upon delivery, and with the ADA vehicles we made a point of assisting in inspection of ADA features. We encountered numerous problems in those early deliveries, with vendors overlooking or differently interpreting the requirements concerning interlocks, door open sizes, clear pathways, etc. We got a reputation as being sticklers for the details of the ADA requirements, but we felt it was worth the effort to push the manufacturers into really meeting the requirements from the beginning, so that all future purchasers would benefit.

Working with Vendors/Manufacturers

While we insisted that vehicles must fully meet the ADA standards before we would allow them to be accepted, we also tried to work with the manufacturers and vendors to figure out how to best comply. Many times it was a matter of minor changes. Sometimes things had been designed to go together one way, but they had been installed a different way resulting in a failure to meet tolerances, etc. Everybody was in a learning mode, but failing to enforce the specs would have just delayed our ADA implementation efforts.

Besides working to remedy delivery deficiencies, our staff has also tried to encourage new and improved features which will allow vehicles meeting the ADA specifications to be more versatile. We've tried to pursue features that reduce the negative impact of the ADA features on the vehicles ability to serve non-disable passengers. We felt that this was, and still is, a critical element of getting the industry to embrace ADA implementation.

We worked closely with seating manufacturers to move away from flimsy "flip-down" seats to a sturdy forward-facing folding seat to accommodate non-disable passengers in the wheelchair securement areas when no wheelchair was being transported.

We've also worked with vendors/manufacturers of low-floor minivans on the design of swing-away ramp/gates, which will facilitate the boarding of persons not using wheelchairs. Again the key is to have a vehicle that functions effectively for non-disabled passengers as well as for persons with disabilities.

We've also worked with vendors in the area of retrofitting heavy duty coaches along the lines of ADA. We've found it isn't always possible on older vehicles to fully meet the ADA access standards, but, considering that retrofitting isn't required at all, we've successfully pursued "requests for equivalent facilitation" with FTA to allow retrofits which bring older vehicle almost up to ADA standards.

Working on Funding

All these other efforts wouldn't get us to far if we hadn't been able to obtain sufficient funding. ADA-equipped vehicles do cost more than their non-ADA counterparts. Increasing the federal share on ADA vehicles does solve much if there isn't adequate federal funding available to start with. We would not have made anywhere near the progress we've made on implementing ADA if we had been limited to the funding which comes to Iowa under the various FTA formula programs.

Our successes in moving forward with ADA have been closely tied to our successes in obtaining capital discretionary funds out of the Section 3 bus category. Iowa pioneered the concept of state-wide Section 3 grants back when the

program was based on administrative discretion. We were successful by emphasizing how our projects fit in with national goals. Now that the program is governed by congressional earmarks, we are doing the same thing. We've worked with our state transit association and with Senator Harkin, who happens to be on the Senate Appropriations Commitee's Subcommittee on Transportation. The fact that we have taken a strongly supportive position on ADA implementation doesn't hurt when we identify what our needs are, and we certainly will always point out the ways in which our proposed projects will further the implementation of the ADA in Iowa.

Looking to the Future

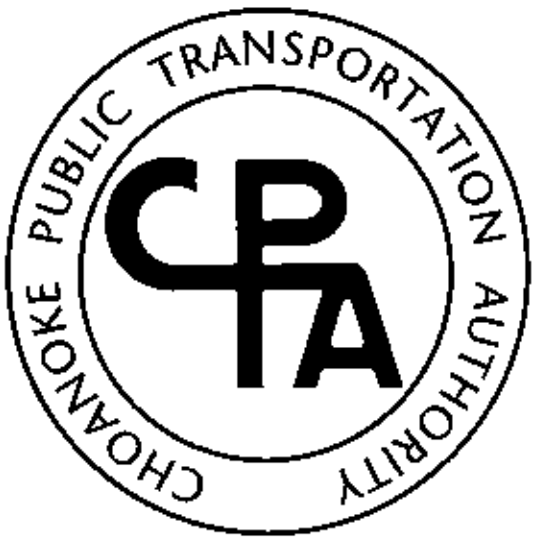
As we look forward from this point, we plan to continue our commitment to the ADA. Where we'll end up is hard to say. We see a lot of support for low floor vehicles in our state. We're hoping to see continued improvements in the design and production of these vehicles. It also wouldn't hurt to get some of the manufacturers on a little more stable financial footing.

That stable financial footing comment could also be directed toward the transit industry as a whole. I said earlier that ADA only assures equal access to what services are provided. It looks like we're all going to have some real challenges making sure there is adequate transit available in the future for anyone outside the major cities, whether they are persons with disabilities or not.

Concurrent Session #4
6. Conversations with Administrator's Award Winners

Wendell Edwards
Executive Director
Choanoke Public Transportation Authority
Raleigh, NC

Choanoke Public Transportation Authority

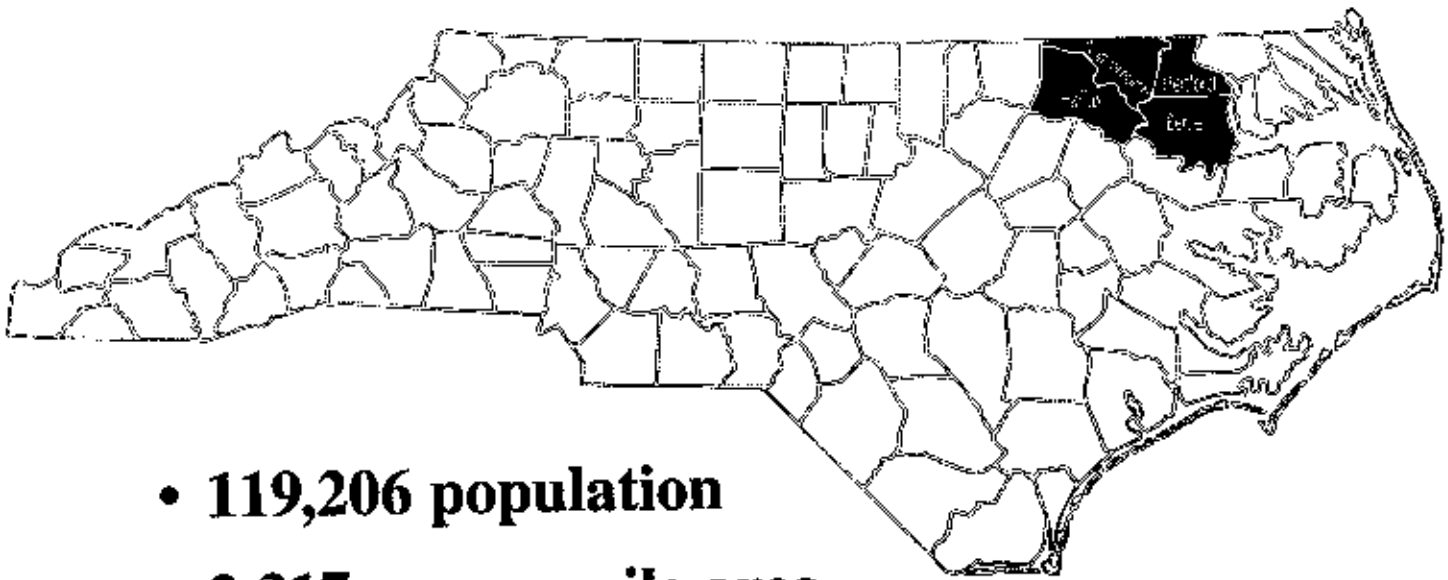


1995

CPTA

- Established in 1977
- Provides rural and small urban public transportation in four North Carolina counties
- Provides demand response and subscription route services
- Serves 27 human service agencies
- Serves the general public
- Has 34 employees

North Carolina Counties Served by CPTA:



- 119,206 population
- 2,317 square mile area
- 51 persons per square mile

CPTA's Clients:

- Human service agency passengers
- Head Start and Smart Start children
- Senior citizens
- Dialysis patients
- General public passengers
- Community college students
- Criminal justice passengers

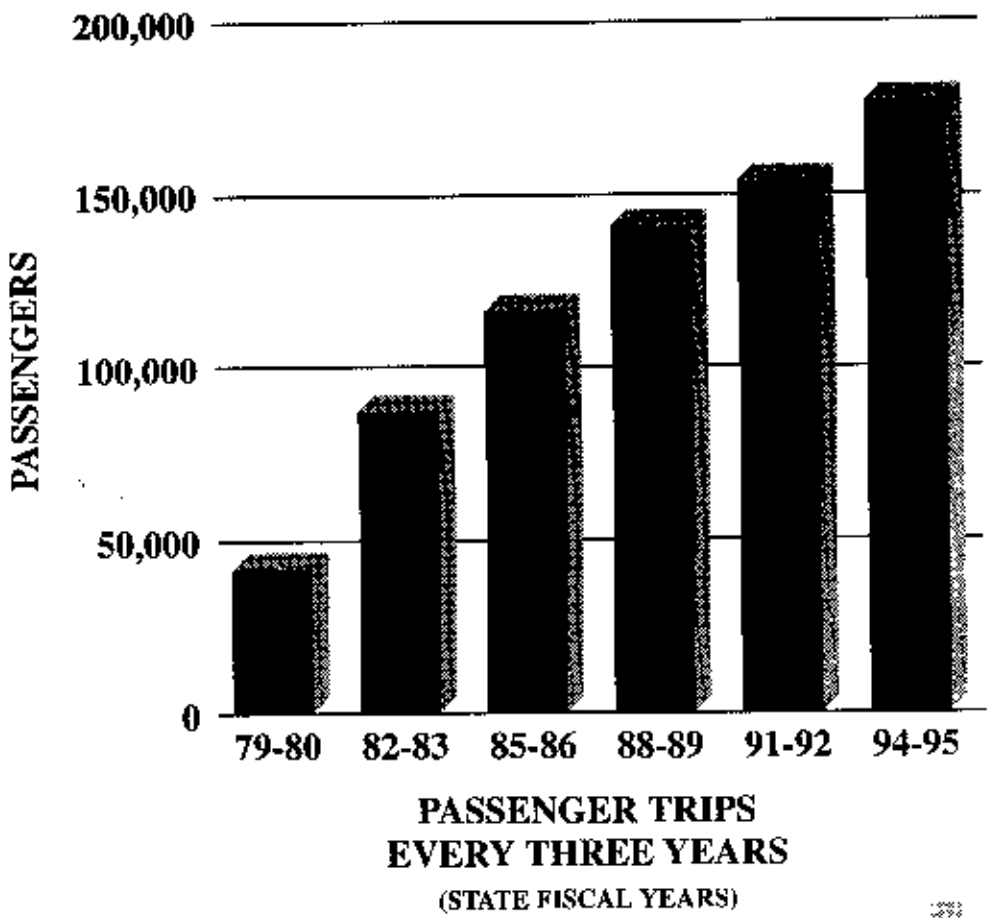
CPTA's Fleet:

- 11 small buses (one lift-equipped)
- 14 conversion vans (six lift-equipped)
- 10 standard vans
- Two service vehicles
- All vehicles equipped with two-way mobile radios
- Excellent in-house maintenance facility (vehicles regularly exceed 300,000 service miles)

CPTA Provides Transportation to:

- Medical appointments
- Educational centers
- Shopping areas
- Senior centers
- Human service agencies

CPTA's Passenger Trip Comparison



CPTA's Employee Events:

- Employee of the Quarter (selected by CPTA employees)
- Annual Employee Awards Banquet
- Annual Employee Picnic
- Annual Employee Fishing Trip
- Monthly CPTA newsletter
- Retirement dinners
- Participation in local and statewide Roadeos

CPTA's Special Events:

- **Monthly special outing for nursing home residents (i.e., ride to see the Christmas lights)**
- **Annual Senior Citizens Day**
- **Annual Passenger Appreciation Day**
- **Annual special outing for developmentally disabled children (i.e., ride to the park to play)**

CPTA's Special Events:

- National Try Transit Week
- CPTA Open House and Reception
- Meals On Wheels delivered
- Donations for Leukemia collected
- Halloween event held for children
- Food for needy family collected at Thanksgiving and at Christmas
- Christmas gifts for needy children collected and delivered (by Santa)

CPTA's Public Relations:

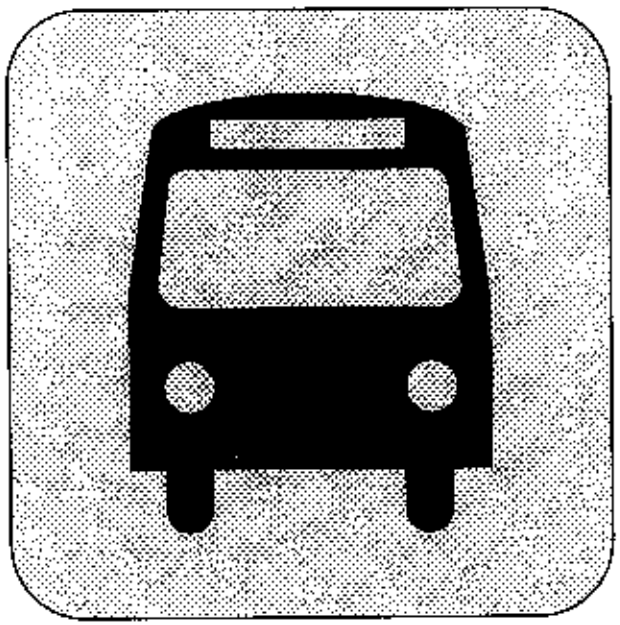
- Good rapport with local newspapers
- Monthly luncheon held with human service agencies to talk about services provided
- Annual meetings with Board of Commissioners, followup luncheons held
- Community forums held to discuss new ideas for routes and ridership
- Ridership surveys conducted
- CPTA Director is active on local committees throughout the four-county region
- Local Booster Club sponsor

Concurrent Session #5
2. It's a Disaster - and You are the Victim

Jon Monson
Mayflower Contracting

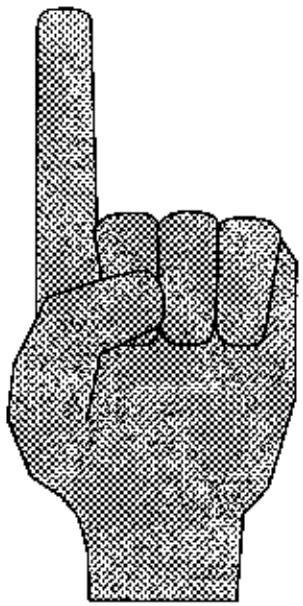
Introduction

- Mayflower Contract Services, Inc.
- Jon Monson
- Suddenly, its a disaster



RULE NO. 1

A DISASTER WILL
STRIKE AT THE
WORST POSSIBLE
TIME WHEN YOU
ARE THE LEAST
PREPARED



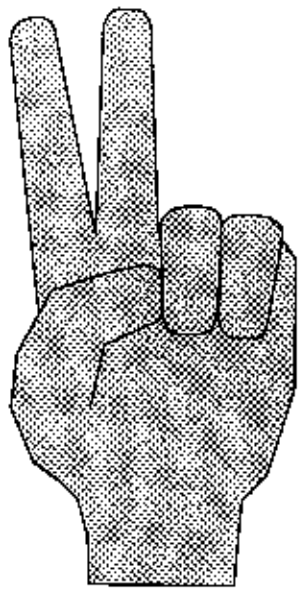
Overview of a Disaster

- Types of Disasters
  - Physical Disaster
  - Operational Disaster
  - Natural Disaster
  - Public Relations Disaster

- How You Can Manage a Disaster

RULE NO. 2

Disasters are aggravated by poor planning and slow, uncoordinated management response



Preparation

- Detailed Disaster Plan
  - Specific Assignments For Senior Team
  - Communications
  - Practice
- Preparing Materials
- Press Relations Plan
- Board Communication Plan

FRONT OF DRIVER CARD

Driver Emergency Communications Card

Office:	510-228-9200
Asst. Manager:	707-787-9317
Manager:	510-704-2452
Regional Mgr.	510-757-9834
Vice President:	209-984-8780
President:	310-447-9030
Pager 1:	510-504-3421
Pager 2:	510-504-3513

LAIDLAW

BACK OF DRIVER CARD

IN THE EVENT OF EMERGENCY

1. Stay Calm.
2. Notify Dispatch of Situation Immediately.
3. Provide Assistance to the Injured.
4. Secure the Scene.
5. Obtain Courtesy Cards.
6. Obtain License No. / D.L. No. of Other Party.
7. Secure Your Vehicle.
8. Do not talk to anyone until supervisor arrives.

LAIDLAW

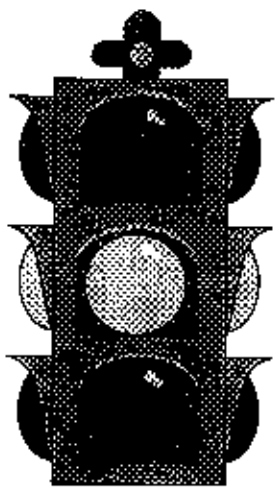
LAIDLAW

On Scene

- Assign On Scene Manager
  - Coordinates With Authorities
  - Talks to Press
  - Preserves Scene For Investigators
  - Isolate Employee(s)
- Communication With Crisis Manager
  - Close Coordination Avoids Mistakes
  - Provide Regular Updates

Keep It Running

- Assign Operations Manager
  - Does Not Deal With Crisis
  - Coordinates With Crisis Manager
- Restore Service
  - Communicate With Passengers
  - Communicate With Employees
  - React In Calm, Assuring Manner
- Obtain Additional Resources If Needed



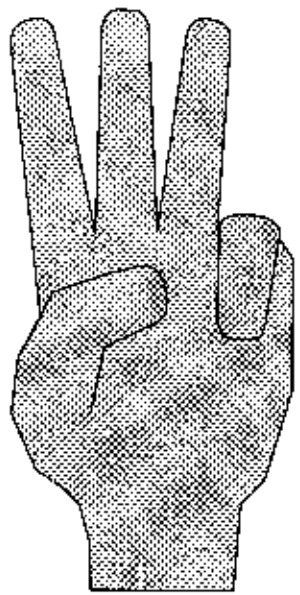
The Crisis Team

- Crisis Manager
  - Senior Executive Of Agency
  - Coordinates All Crisis Activity
  - Makes Formal Press Statements
  - Obtains Resources Required
- Senior Investigator (Manager)
- Liaison From Other Agencies
- Public Relations Staff

LADLAW

RULE NO. 3

Never lie or give
uncertain information
to the press,
authorities or any
other stakeholder

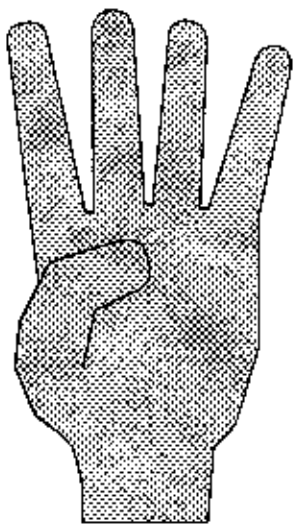


Post Crisis Analysis

- Reports From Internal/External Investigations
- Use Peer Review
- Develop Action Plan to Avoid Future Disasters
- Critique Performance of Crisis Team

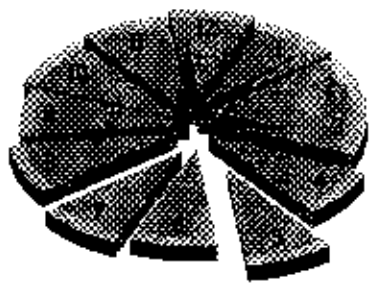
RULE NO. 4

Don't be afraid to
learn the truth about
your organization



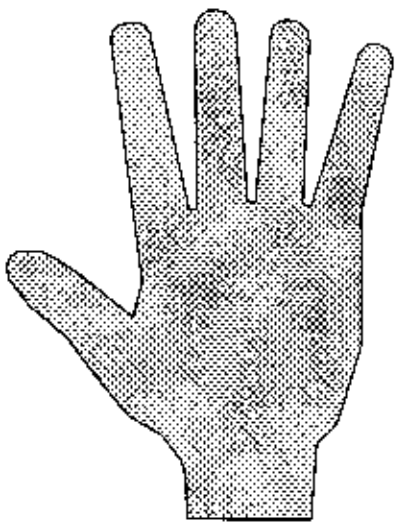
When Disaster Strikes

- Simultaneous Notification of Crisis Team
- On Scene Manager Reports to Scene
- Crisis Manager Notifies Board Members
- Coordinate With Other Agencies
- Keep the Operation Running
- Start Written Record of Proceedings
- Time is the Critical Element



RULE No. 5

Time is the critical element. Have instant and redundant communications system.



Real Life Example

- Bus Accident on I-580
  - On Scene Manager
  - Operations Manager
  - Crisis Manager
  - Liaison / California Highway Patrol
  - Accident Investigation Team
- Post Crisis Analysis

Conclusion

- Its **When** not **If** A Disaster Will Strike
- Your Success is Directly Related to the Amount of Planning and Practice
- Perception is Reality
- It is Your Moral and Professional Responsibility to Learn From Every Disaster

Concurrent Session #5
3. Building Quality Service

Marj Walsh
Trainer
(Formerly of Caravan, Fort Collins, CO)

BUILDING QUALITY SERVICE

Everyone's a Customer!

Trainer:
Marj Walsh
3124 Swallow Place
Fort Collins, CO 80525
970-226-5095

The quality process is a NEVER-ENDING JOURNEY as community transit systems try to fulfill ever more demanding and expanding customer needs and deal with decreased funding, tougher competition, and changing technology.

QUALITY SERVICE is a very broad subject - defined locally by the variables of people, places, and customs. While there are precedents and successful case studies, there is NO ONE MODEL for guaranteed quality service.

The video we will see today, therefore, is designed to be THEMATIC and MOTIVATIONAL, challenging everyone in every system to create an environment that will foster quality service in the very unique communities they serve.

We don't have the recommended day and one half; WE have an hour and one half. We had better get on with our journey.

What we will do today is to try to stimulate your thinking about how quality service can become the *standard* in your organization. We will view the 22-minute video that is our bus for this journey, and we will make brief stops along the way to touch on some of the topics introduced. Your comments and questions will be welcome as we each develop our own roadmap to quality for our own organization.

Every journey has a beginning. For ours, we have the advantage of a very high-tech vehicle...equipped with television...and, of course, remote control. Only one remote control...so we will be watching along with our leader, Joe Public, as he surfs the channels and finds, of course, what he likes when he likes it!

SECTION I
The Elements of Quality Service
[DRAGNET] [Sounds of Quality]

Quality service is easier to recognize than define.

- On-time service
- Clean vehicles
- Neat, courteous, and friendly drivers
- Helpful operators and staff

The basis is good policies and practices, executed every day by everyone.

Quality service checklist

- Mission statement - absolute commitment
- Description of service - concise, clear, user-friendly
- Service coverage - density, older rider concentrations, special needs
- Days and hours of service - frequency, span, directness
- Scheduling practices - fixed-route, demand-response
- Fare structure - fair, easy to comprehend, remember, administer
- Vehicle considerations - equipment, maintenance, size
- Passenger issues - assistance, ADA compliance, complaints
- Safety/emergency considerations - procedures, prevention, training
- Public information - maps, timetables, signage at stops and on buses

How is QUALITY SERVICE defined in your organization?

SECTION II
What is Building Quality Service?
[RTAP Jeopardy] [Pride in Working Together]

Setting a Total Quality Management Strategy
TQM principles as a means of improving the work environment and encouraging employees to be more helpful to customers and each other.

TQM Checklist
- Customer satisfaction (meet expectations, anticipate needs)
- Teamwork (everyone is responsible)
- Management from the front (managers/board members, all in process)
- Training and education (focus on the needs)
- Communications (information, not emotion, for decisions)
- Commitment to change (even procedures now hindering productivity)
- Continuous renewal (good is not enough!)

Practicing Positive Customer Relations
- Never argue or be short-tempered; not interrupting, listening carefully.
- Communicate with positive body language and tone of voice.
- Never underestimate the power of a smile or nod.
- Know about all the aspects of the system; customers expect that.
- Passengers are your unpaid sales force OR spread dissatisfaction.
- Be responsive, knowledgeable, courteous, helpful to passengers.
- Passengers like a friendly voice, a smile, help with their problem

Understanding the Special Needs of Customers
- Commuters
- Students
- Senior Citizens
- Persons with disabilities
- First-time riders

Handling complaints
- Customers expect understanding and a quick resolution to their problem. If the problem cannot be corrected, then a sympathetic ear and a positive attitude is especially important.

How can TQM principles be applied in your organization?

SECTION III

The Tools for Determining Customer Satisfaction
[RTAP News] [National Inquisitor]

Audiences are always changing; so are their transit needs. Ongoing research is the best way to monitor needs and adapt services.

Research is Useful in Several Areas

- Market information (age, income, needs, desires, level of knowledge)
- Cost/benefit analysis (economic impact of service or expansion)
- Performance (people, equipment, or both)
- Customer satisfaction (uncovering attitudes, soliciting comment)

Methods for Gathering Information

- Opinion polls (by professionals, staff, or volunteers)
- Surveys (door-to-door, on-board, client, economic impact)
- Performance surveys (turn-downs, on-time, dispatch monitoring, safety)
- Employee surveys (attitudes and opinions, suggestions for change)
  All surveys should be tested on participants from the target groups.

Customer Feedback

- Customer feedback (not "complaint") box
- Hotline number
- Passenger complaint and compliment records
- Driver interviews

Focus Groups

- Formal (facilitator, two-way mirror, taped, full report)
- Informal (senior citizens, students, commuter, or special needs groups coming together to comment on, for example, proposed new service maps)

Making the Most of your Research

- Knowing about a problem gives you the opportunity to fix it.
- Results should be regularly reviewed by staff and Board.
- Positive findings make for good public relations.
- All good news should be communicated to employees, customers, and the general public.

What research methods might work best in your organization?

SECTION IV

The Importance of Communications to Internal Relations and Service Delivery

[Caught in the Act] [Football Lowlights]

A transit system is only as good as its human resources. Quality service is enhanced when employees feel positive, work together effectively, are recognized for jobs well done, and perceive open communication lines.

The Cornerstones of Training

- Review collected data to identify priorities for training.
- Train in-house when possible, saving time and money.
- Utilize applicable RTAP training modules.
- Be as *specific* as possible; make it apply to your organization.
- Make your objectives clear (teach skills, raise awareness, or other)
- Evaluate results and solicit suggestions for improvement.

Training Approaches

- Lectures (quick, but may need to be combined with small group talk)
- Workshops (demonstrations, studies, role-playing, problem-solving)
- Programmed instruction (workbook, video, computer)
- Behavior modeling and demonstration (practice sessions)
- On-the-Job (skill development with experienced professionals)

Comprehensive Training Coverage

- Organizational (TQM problem solving, retreats, sensitivity training)
- Professional and leadership (computer, management, communications)
- New-hire driver (checklist, and subsequent review sessions)
- Driver skills (refresher courses, rodeos)
- Mechanic skills (refreshers, hands-on, on-the-job, specialty training)
- Safety (OSHA, CPR, first aid, risk management, safe work habits)
- Passenger relations (customer focused for target groups)

Making Employee Communications Count

- Recognition (private, public, and frequent!)
- Employee suggestion systems (boxes, meetings, channels, rewards)
- Newsletters (attractive, timely, useful, consistent)
- Open communications (freedom to express ideas, expect respect)

What would the hidden camera *catch* in your organization?

SECTION V

Marketing Quality Service in Your Community

[Transit Today] [Get the Word Out!]

How do you remind the community that transit is an economical, easy, and pleasant way to get around? What leads people to support and use transit? How do you tailor your message to target audiences?

Community Outreach Program

- **Informational/promotional materials (newsletters, schedules, posters)**
- **Vehicle messages (phone numbers, slogans, rider tips)**
- **Direct mail (good lists, help from others making mailings)**
- **Speaking forums (business/civic groups, seniors, churches, youth)**
- **Local government and community associations (meetings, events)**
- **Public service announcements (PSA's on local radio, media)**
- **Business/promotional tie-ins (grocery bags, milk cartons, utility bills)**
- **Cause marketing (tie-ins with fund-raisers, public service campaigns)**
- **Vehicle/facility tours and open houses (specialty buses, field trips)**
- **Transit system days/weeks/months (proclamations, free days)**
- **Information videos (alone or with help from local cable or volunteers)**

Making Effective Use of Your Local Media - a gradual, ongoing process

- **Coordinate media relations through single source, spokesperson.**
- **Compile and maintain accurate, comprehensive media list, FAX #'s.**
- **Use the phone to follow up on everything.**
- **Start at assignment desk to find out the best/right reporter to approach.**
- **Show how your story relates to readers, listeners, viewers.**
- **Make sure your story is current, and give media time to plan for it.**
- **Provide helpful material; make it easy for them.**
- **Position yourself as a source and an expert.**
- **Be proactive; call to offer comments on relevant issues.**
- **Put your best foot forward, but always be truthful.**

Basic Tools for Updating the Media

- **News releases and press kits (ready-made file on your organization)**
- **Letters to the Editor (from manager, board member, riders)**
- **News conferences and special events (with written back-up)**
- **Talk show programs (with newsroom or public service department)**
- **Public service announcements/PSA's (re: health, safety, environment)**

Making the Most of Sales Promotions

- Giveaways and discounts (transit weeks, free days, free buses)
- Weekly/monthly passes (ease, convenience, and economy)
- Mobile ticket sales (retirement homes, campuses, employment sites)
- Special ticket promotions (community events, concerts, sports)
- Hotlines (catchy name and slogan, info for first-time callers by mail)
- Selling up (promoting multiple ticket and pass options, not one-way)
- Sales premiums (calendars, tee-shirts, bumper stickers, posters)
- Radio promotions (contests, giveaways, themes)

Making the Most of Advertising - where you *control* the message

- Simplicity (focusing on one or two main points for target audience)
- Repetition (sustaining a campaign to "register" with target audience)
- Consistency (same overall look and message, colors, style, identity)
- Targeting (knowing your target before you "shoot")
- Tracking (monitoring what works, coupons, special box #'s)

Options for Placing Ads

- Newspapers and magazines (print for detailed messages)
- Television (rider testimonials, quality service on the road)
- Radio (flexible, easy, relatively inexpensive, possibility of leveraging)
- Outdoor (posters or billboards in high foot and/or vehicle traffic)
- Trade-Outs (ad space on transit for ad space in media outlets)

How can your Transit Today demonstrate quality service and catch the favorable attention of your community and your local media?

NOTE: Training material is based on Building Quality Service - Everyone's a Customer, an RTAP training module produced by:

U. S. Department of Transportation
Federal Transit Administration
Rural Transit Assistance Program

Modules may be ordered by contacting your RTAP State Coordinator for information about obtaining copies of the training package in your state, OR you may contact the FTA RTAP National Resource Center at 1-800-527-8279.

Concurrent Session #6
1. Intercity Bus Success Stories

Robert Shellenberger
Manager, Intercity Passenger Programs
Bureau of Public Transportation
Pennsylvania Department of Transportation

Coyd Walker
President, Denver Coaches
Scotts Bluff, NE

Bill Strawn
Public Transportation Division
Texas Department of Transportation

John J. Brandal
Transit Manager
City Fort Dodge, IA

PENNSYLVANIA INTERCITY BUS ASSISTANCE PROGRAM
ROBERT L. SHELLENBERGER, MANAGER
INTERCITY PASSENGER PROGRAMS
BUREAU OF PUBLIC TRANSPORTATION
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

OVERVIEW

Pennsylvania has long recognized the importance of maintaining essential intercity bus routes. Like most states across the country, scheduled intercity bus services flourished in Pennsylvania during the 1940's and 1950's and then began a steady decline with respect to the number of carriers maintaining regular scheduled route operations. Thus, many communities in Pennsylvania and across the nation lost the only means of public transportation available to them other than the private automobile.

In 1976, Pennsylvania's General Assembly enacted the "Pennsylvania Rural and Intercity Common Carrier Surface Transportation Assistance Act", which is commonly referred to as Act 10 of 1976. Act 10 provided for the first time ever authorizing legislation to support annual appropriations for both rural and intercity transportation.

Pennsylvania's first intercity bus assistance grant was awarded in Fiscal Year 1976-77 to one carrier to maintain a single route. The program supported entirely with state general funds rapidly expanded from one state supported route to a state funded network comprised of fifteen different route segments maintained by five private carriers. Over the course of the nearly twenty year existence of PA's intercity bus assistance program, our annual

state appropriation reached a saturation point in 1991 at a level of $1.36 million. Although most of the $15 million committed since the inception of our intercity bus assistance program has been awarded for operating assistance, various small scale capital projects have been funded exclusively with state funds.

FEDERAL ASSISTANCE

Pennsylvania's apportionment of Federal Section 5311 [formerly Section 18(i)] funds to support intercity bus operations was timely indeed since budget projections submitted by the carriers to preserve the existing state sponsored network in Fiscal Year 1992-93 exceeded the available state general fund appropriation. Currently, we are maintaining our existing intercity bus network by providing $1.36 M in state funds combined with almost $300,000 in federal funds.

As mentioned previously, our state sponsored intercity bus network is comprised of 15 various route segments operated by 5 carriers. Since 4 of our 5 grantees have satisfied all federal requirements including the 13(c) Labor Warranty Provision, they are eligible to receive federal funds. Greyhound has opted not to accept the 13(c) condition, and therefore is ineligible to receive federal funds.

Although we have successfully expended the full amounts of our 5% and 10% apportionments (first and second years), our current level of federal operating assistance does not require expending the current 15% apportionment in this fiscal year.

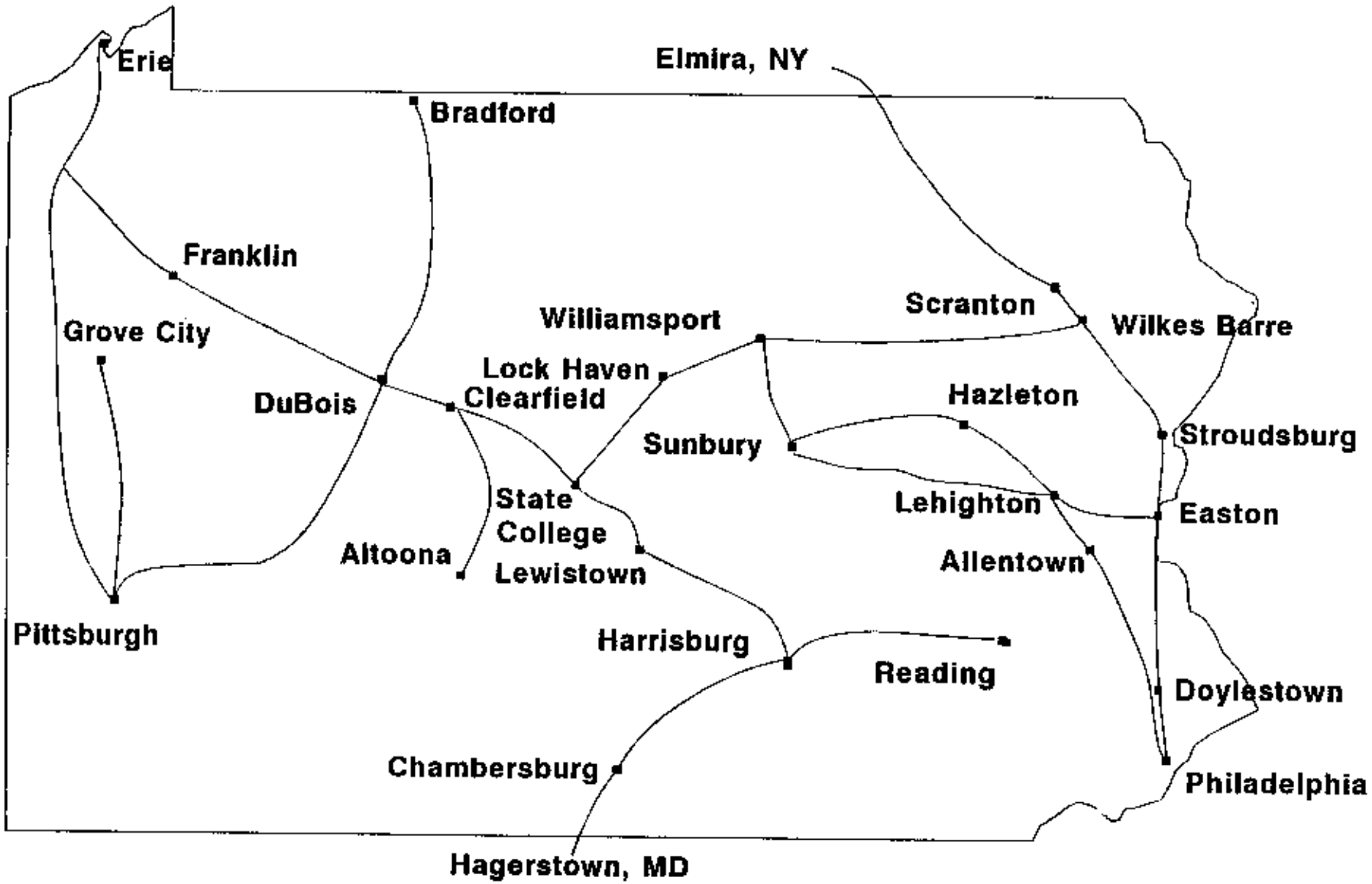
PENNSYLVANIA's S. 5311 APPORTIONMENT/EXPENDITURES

FISCAL YEAR	%APPROPRIATION	AMT. APPROPR.	FUNDS EXPENDED
FY 1992-1993	5%	$ 300,000	$300,000
FY 1993-1994	10%	$ 520,000	$520,000
FY 1994-1995	15%	$ 986,230	$307,000
FY 1995-1996	15%	$1,010,300	-0-
FY 1996-1997	15% less 20%	$ 808,250	n/a

PROGRAM MEASURES

5 Carriers of which 4 receive federal funds	15 subsidized route segments	1,944 total route miles
2,021,000 total annual bus miles		300,000 annual ridership
51% average cost recovery		$0.78 average subsidy/mile

INTERCITY BUS ASSISTANCE PROGRAM
STATE-SUBSIDIZED ROUTES



CHALLENGES

We are currently considering expanding our existing program to better utilize available federal funds for intercity bus assistance projects. With regard to operating assistance, we are considering looking beyond the traditional first-party (private intercity bus carrier) operating assistance contracting process to one which includes seeking participation by local transit authorities. We view these types of potential projects as an extension of services provided by a local entity. A project could be as simple as a joint sub-contract between two or more rural transit providers to permit a scheduled public transportation service crossing multi-jurisdictional boundaries. We are also about to enter into an agreement with a public agency to construct an intermodal facility that will be shared with a public agency and five private carriers. We are also considering other capital projects that may include ADA compliance and a signing program.

RURAL PUBLIC AND INTERCITY BUS TRANSPORTATION
12TH NATIONAL CONFERENCE DES MOINES 1995
Session #6 Intercity Bus Success Stories

Denver Coach Inc Presenter: Coyd Walker, President
4 Cedar Lane
Scottsbluff NE 69361 308-632-8400 800-658-3125

Although in May Denver Coach began a new 3-day-a-week service to Eastern Nebraska, which has already reached approximately breakeven status, I will restrict this discussion to our established service, which connects the NE Panhandle with Denver CO and intermediate stops.

December is our busiest month. Last December we carried 1,000 passengers (counting a round trip as 2). The summer is also busy. In July we carried about 735. On the other hand, in February we carried about 420. Contrast even our low month with the 3 per day (I assume each way) that I'm told Trailways carried when they discontinued service through the Panhandle years and years ago.

After Trailways came Star Bus, a Greyhound feeder service that connected in Kimball off I-80. Its service was discontinued in 1991, 8 years after Denver Coach commenced operations. Because Star Bus was part of the traditional bus network, a contrast of its operation with that of Denver Coach highlights both our strengths and weaknesses.

Star ran a regular-route operation. This means it ran a schedule, which was oriented toward Greyhound times no matter how inconvenient, regardless of demand. For Denver Coach, Greyhound is one "destination" among many, and not a very important one. Our schedule is based on convenient times for the majority of passengers. We have far more interested in the Denver airport than in Greyhound. This is a hardship for passengers interested in Greyhound - a definite weakness of Denver Coach compared to Star.

We only go where there is known demand. Although we never have a day any more with zero demand, there are always some stops and sometimes some parts of our routes for which no resevations have been received. We don't make "empty" stops or cover unwanted "legs". This means a passenger cannot just show up and expect us - another weakness compared to Star.

On the other hand we can offer many stops, knowing they won't all be selected most days. We can also serve "thin" legs, knowing that on some days they will provide several passengers and on others we won't incur costs associated with them. These are some of the strengths that have allowed our operation to succeed, but not without

considerable cost. Each day is different, and the amount of micro-managing involved is considerable.

Like an airport shuttle we take reservations, and we go the extra step of confirming them the day before. Like taxis we pick up and drop off at home in many Panhandle communities - but not in Denver. It was when we started this that business "took off", but imagine the extra planning involved. Finally, like a bus, we do run a schedule, what I call a "flex schedule", but it is to passengers with reservations, rather than the schedule, that we make our commitment.

Denver Coach thus fits no traditional category. Why should it? Nor is our service strictly rural, but it is rural passengers we serve. If they want to go to urban areas, then that is where rural transportation should take them. Not all demand will be satisfied, but far more than with traditional service and, where the demographics are right, in an economically viable fashion.

INTERCITY BUS FUNDS IN TEXAS

Bill Strawn

Public Transportation Division, Texas Department of Transportation

The use of the intercity bus funds provided under section 18(i) of the Federal Transit Act, has been thoroughly investigated within Texas, with the state believing that funding only capital programs is the most suitable use of the funds within Texas. Although Texas has a $2.9 million intercity bus service enhancement fund now, the decline of the industry within Texas have so many factors that the small amount of funds available will not reverse the trend. Instead we are hoping to increase the access to intercity service by updating terminals and improving disabled accessibility.

TxDOT and the Texas rural public transit industry have been making an effort to improve the intercity bus transportation since well before section 18i was passed. In 1990 and 1992 TxDOT provided state funds to match federal discretionary and rural monies to pay for the construction of intermodal terminals in 6 communities. Collocated with the intercity terminals are the main and regional terminals and offices for rural providers.

The first year of the section 18I program, the Texas Railroad Commission stated there were no outstanding certificates of need in Texas, and the governor released the funds to the rural public transportation operators in the state, some

of whom used the funds to improve their terminals.

At the same time, TxDOT initiated a $100,000 study of the condition of intercity service within the state. The study revealed 450 communities in Texas lost intercity service between 1982 and 1994, with the greatest loss during the Greyhound bankruptcy. Yet of communities with over 5000 population, only 21 towns were further than 10 miles from the nearest intercity service, and all but 8 of these communities have access to public transit service which will take them to the intercity terminal. Of the 8 communities without intercity service or public transit, six are in the Dallas-Fort Worth urbanized area, and one rural community has public transit as of September 1, 1995.

Using the information developed by the study and other research on the accessibility of intercity buses within Texas, TxDOT issued invitations to all 25 intercity operators within Texas for a meeting to develop a full understanding of the needs and desires of the intercity carriers. Of the operators who attended the meetings, one dropped out when we chose not to provide route subsidies or to purchase new equipment in its entirety.

With the information these meetings provided, a team of TxDOT employees assembled a request for proposals which outlined a plan to fund multimodal terminal rehabilitation or construction, and accessibility improvements for over the road coaches.

Our logic behind these choices is that the condition, location and operation of intercity terminals often dictated against their use by a broader band of the traveling public. In the study mentioned earlier, the factors most likely to increase intercity bus use among the general population were more express bus service, station location and safety, and increases in fares for air and rail line. Since we cannot control fares for air and rail, and increased express service reduces rather than improves service to rural areas, we keyed on improving terminals.

The appeal of older terminals, sometimes located away from the potential customer, with inconvenient operating hours, is not always of the highest. Flag stops are especially hard sells to novice bus riders. The TxDOT goal is to make improvements in the overall condition of intercity bus facilities, either through the construction of new facilities tied to multimodes, or the rehabilitation of older facilities, to eliminate some of the negative perceptions held by novice and non bus riders. As most of the terminals in smaller communities were older, accessibility remains a large problem for the mobility impaired. Since the USDOT has not developed rules for over the coaches, there is little impetus for operators to acquire accessible vehicles. These two factors create an obstacle for potential passengers with mobility impairments. Rather than wait for final rules, TxDOT desires to get ahead of the game, and sees 18I as a helpful tool.

In June of this year we released a request for proposals which asked for projects which met the state program of capital investments on terminals and ADA accessibility. In August we received 8 proposals, of which 5 were for terminal

construction or rehabilitation, one for lifts and securements on board intercity coaches, one for accessible equipment for stations, and one for a review of several stations for what needed to be done to make the stations accessible. Texas has a $2.9 million dollar balance of intercity funds, and all proposals total approximately $2.1 million, so we continue to have a surplus.

Our RFP required any terminals to be rehabilitated or the land for new terminals to be owned by the proposer or the community. 18i monies could not be used to purchase land. This removes some of the obstacles we had experienced in previous facility programs which slowed the start of the project up to three years. Additionally, the community must already have intercity service, the terminal must be open to all intercity bus operators, and at least one other form of intermodal service other than POV must use the completed facility. Other than these four requirements, operators were granted the greatest possible leeway in making their choices on proposals.

PROPOSALS

Of the 8 proposals, 5 are for new or rehabilitated terminals. The smallest projects are new community owned facilities in two rural towns of approximately 11,000 population. One will integrate rail, intercity bus and public transit from 3 separate terminals, the other will have two rural operators and 1 intercity carrier, plus be the terminal for all charters to a popular tourist town. Two facilities are being built

integrating intercity and international bus lines with the local public transit system, while the fifth is a rehabilitation of a 1950's era facility. While these three are in small urban areas, they will all serve bus lines bringing passengers from the rural surroundings.

Three facilities are being constructed with funds from private, federal, community and state funding sources. The intercity carrier is putting up 20 percent of the cost of the modifications required for the facility to fit their needs. The two community terminals will also have limited private funding sources. Our goal with this degree of private involvement is that if the operator has an investment in the facility, he will use greater care in selecting where to ask for section 18I monies and make greater efforts to use the facility when it is complete. I'm sure none of you have ever had someone construct a facility with all government monies and then walk away from it, but we have had some try.

Only one operator requested funds to install lifts on intercity coaches, which surprised us. This is a small start up operation in our state who is planning to run a small intercity line like a transit run. He will have no state or federal public transit funds, but has been recommended to receive the capital assistance to pay for 80% of the costs of the installation of the lifts.

One of the novel proposals, well outside our initial concepts, is for the installation of lifts in bus stations, the purchase of stair climbing wheelchairs and boarding chairs. While not in our initial concept, it fit our outline, and was also recommended for funding. The one element we wanted to avoid was restricting the accessibility improvements to a narrow band that we as bureaucrats devise.

We took this idea as an example of how people will innovate to solve a problem if government lets them.

The project selections have been recommended to our Commission who has the authority to provide funding, and we expect an award by Thursday. TxDOT is excited by the opportunity to expand the ways we can increase the public mobility. We are trying to avoid the trap of thinking we have the only solution, or simply doing what has been done before. Of the three major concerns voiced by intercity bus riders and non users, TxDOT was able to offer support in only one, terminal improvements. By going beyond federal guidelines, we will have increased the mobility of the disabled. We are already preparing for our next RFP, looking for continued improvements in intercity service within Texas with the remaining balance of 18i funds and any additional monies appropriated for FY 97.

We recognize the valuable role intercity carriers play in the public mobility, and will seek enhancements within the framework of all forms of public transportation. Maybe one day we will assist a public transit, rail and intercity terminal as part of an airport project.

One of the positive outcomes we can report is the formation of intercity bus trade association within Texas. Not all operators have cordial working relationships, and there is still a strong competitive spirit, but the industry has assembled the ability

to develop a voice in state decisions on intercity funding.

D.A.R.T.'s Experience with Intercity Transportation

John Brandal
Transit Manager
City of Fort Dodge, D.A.R.T. Bus
Fort Dodge, IA

D.A.R.T. Under contract with Jefferson Lines, began service in january 1990. The circumstance that led to the contract was, in 1989 Greyhound dropped their route that followed Highway 20 leaving no service to the area. This is probably the main factor as to why D.A.R.T. Has been able to benefit by contracting with Jefferson. The bus service was still fresh in the minds of the people that used the service. The geographical location of Fort Dodge was also a factor. The scheduling of the Jefferson routes on I-35 made it practical to transfer north and south bound passengers. The primary reason we did contract with jefferson was to provide a service to the community and region needed. Without our service, the nearest ticket agents would be, Ames (65 miles south) or Mason City (93 miles north).

At the start there were problems that had to be worked out, such as learning how to write the tickets, how to ship packages, working with our insurance company to provide coverage for this service, and dedicating a bus for the shuttle to the interstate. On the first run we made the bus broke down. We entered into a contract with the regional transit agency (Midas) to provide the service. This meant we did not need to apply for operating authority. Jefferson has been very good at keeping us informed as to changes, a representative usually stops in four times a year to update us on changes occurring during the year.

The first year of operation D.A.R.T. lost money, (the people were not sure if service would still be operating when they were ready to return from their destination). It took the support of our city council to continue the service. The second year of service showed a very small amount on the positive side. Since then, we have newer equipment, making the service more dependable and comfortable. Since the start, we have been able to control our costs making the service more profitable.

The success of the operation as i see it was the total cooperation of several agencies including the Fort Dodge City Council, midas Council of Covernments, Jefferson Lines,Trumps Standard Truck Stop and the Iowa Department of Transportation. We are the only way that the people of this region have to make connections to intercity transportation. There is also service from the surrounding communities by way of the regional transit systems.

This operation is not without problems, we still must contend with constant route changes by Jefferson and the other connecting lines, routes are still being dropped or changed, making the routing of passengers sometimes difficult, if not impossible at times. Sometimes the connecting lines are not allowed to use the "Russels Guide" for routing, which means that Fort Dodge is not shown as a destination. Lost luggage is always a problem, especially when several bus changes are made before reaching their destinations.

Weather is always a problem, especially in winter, even if we are on schedule, it does not mean that our bus will return on schedule. If there is a breakdown on one of the connecting buses, it could sometimes mean several hours of delay.

Our service operates every day of the year, holidays included. Our shuttle departs Fort Dodge at 10:45 a.m. and returns at 1:45 p.m. Our ticket sales are from 8:00 a.m. till 5:00 p.m. Monday through friday, 9:00 a.m. till 11:00 a.m. Saturday, and 9:30 a.m. till 11:00 a.m. Sunday.

What can be done to increase the initial ridership on the shuttle? An advertising campaign to make the public aware of the service is an absolute must. Jefferson Lines is in the same boat as many systems seem to be these days, and don't have the money to spend on advertising. That leaves the transit systems to get the word out. We have used our route maps as one means to promote the intercity service. Our route also connects with Webster City, with the cooperation Pizza Hut, passengers can get on the bus with advanced reservations. This way we have the ticket and itiner-

ary ready and with the driver when he arrives in Webster City. Then the driver just has to collect the fare. We also find that many of the calls we receive to reserve a ticket are from out of town people that meet the bus in webster city.

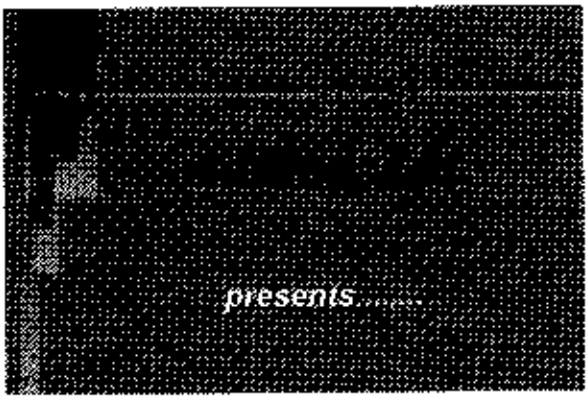
I have not meant to discourage any system from setting up a service such as ours, but to give you some insight as to what you can look forward to. I believe that the initial losses can be minimized by advertising in advance of operation. I also believe that starting a service such as ours is not only a benefit to the transit system, but also to the public. One thing that helped D.A.R.T. - get established and minimize the initial losses are the industries located in and around the city. As an example, the trucking companies use our service to bring in new drivers from throughout the country and to provide them with a way home when they quit or need to pick up a truck at another city or terminal.

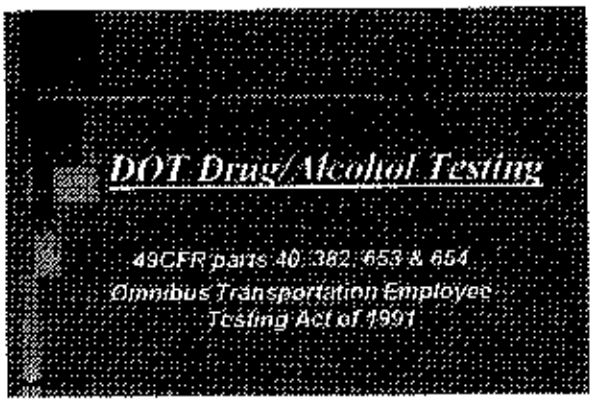
Finally, I must thank my staff, without whom this service would not work, Noble Nekvinda who keeps track of route changes and takes care of the reports, and Brian Bell who acts as a ticket agent.

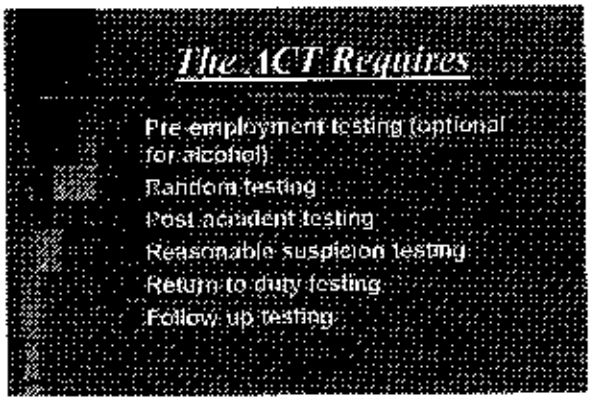
I would be happy to talk to anyone comsidering starting a service such as ours. I can be contacted at DA.R.T. Bus in Fort Dodge, Iowa. Our phone number is 515-573-8145.

Concurrent Session #6
3. Drug and Alcohol Testing

Kenneth M. Will
AdMed, Ltd.

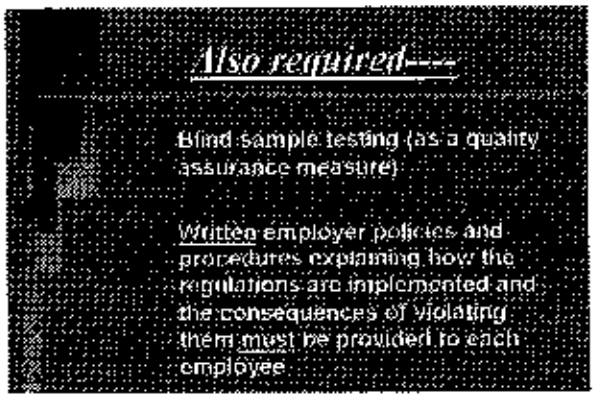

presents.....


DOT Drug/Alcohol Testing
49CFR parts 40, 382, 653 & 654
Omnibus Transportation Employee Testing Act of 1991


The ACT Requires
Pre-employment testing (optional for alcohol)
Random testing
Post accident testing
Reasonable suspicion testing
Return to duty testing
Follow up testing


Also required---
Privacy in collections
Confirmation of positives
Split specimens
Confidentiality of test results
Scientifically validated random drawings
Opportunity for treatment


Also required----
Prohibitions against Alcohol use
Consequences for positives/use
Testing procedures
The use of Evidential Breath Testing(EBT) devices
Record-keeping
Information, training & referral


Also required----
Blind sample testing (as a quality assurance measure)
Written employer policies and procedures explaining how the regulations are implemented and the consequences of violating them must be provided to each employee

Employer Requirements

BEFORE TESTING

Inform employee(s) & applicants (policy statement)

Employer retains existing authority for determination and/or rehabilitation

Policy Statement

Identify which categories of employees are subject to testing

Describe prohibited behavior

Describe testing procedures

Describe consequences for violating the drug and alcohol regulations

Who has to test (FTA)

All persons who:

Operate a revenue service vehicle, including when not in revenue service

Drive vehicles that require a CDL

Dispatch or control service vehicles

Maintain vehicles or equipment, except contractors to Section 18 transit agencies

Provide security & carry a firearm

Exemption

Volunteers who perform a service as a charitable act without compensation

Training

Display policy & hotline number

Train employees (60 Min for design); no training required for alcohol only printed material

Train supervisors (2 hrs.)

REFUSE TO TEST

"I will not take the test"

Fails to provide adequate urine

Engages in conduct that obstructs the testing process

Fails to provide adequate breath

SUBSTANCE ABUSE PROFESSIONAL (SAP)

A licensed physician, psychologist, social worker or EAP professional with knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled substances disorders

Safety Sensitive Function

PERFORMING (safety sensitive function)

A driver is considered to be performing a safety sensitive function during any period in which he or she is actually performing, ready to perform, or available to perform any safety sensitive function.

SAFETY-SENSITIVE FUNCTION

All duty time at terminal, or other property, waiting to be dispatched

All time inspecting or servicing equipment

All driving time

All time in or on a commercial vehicle, except time spent resting in a sleeper

Safety-Sensitive Function (continued)

All loading or unloading time, supervising or assisting in the loading, remaining in readiness to operate, or giving or receiving receipts for shipment

All time repairing, obtaining assistance, or remaining in attendance upon a disabled vehicle

PROHIBITIONS

Drugs tested for...

- Marijuana
- Cocaine
- Opiates
- Phencyclidine (PCP)
- Amphetamines
- Alcohol

Drug Prohibitions

The use of any drug, except as prescribed by a doctor

ALCOHOL

Any intoxicating beverage containing

- Ethyl Alcohol
- Methyl Alcohol
- Isopropyl Alcohol

Alcohol Use

The consumption of any beverage, mixture or preparation, including MEDICATIONS, containing ALCOHOL

Alcohol Prohibitions (cont.)

Reporting for duty with 0.04 or greater

Possession of alcohol

Use during 8hrs. after an accident (or until tested)

Use during 4 hours before performing

Alcohol concentration of 0.02 - 0.04 shall not perform for at least 24 hours.

If 0.04% or greater (or drug positive)

Must be evaluated by a Substance Abuse Professional (SAP) and must follow any prescribed rehabilitation program

Consequences (employee)

Can't perform

Must be removed from safety-sensitive function

Must be advised of SAP

Must be evaluated by SAP (must complete any treatment)

Must have return-to-duty test

Consequences (transit system)

Failure to certify compliance with the FTA regulations will result in the suspension of your system's eligibility for FTA funding

Tests Required*

*applies to both drugs and alcohol (except pre-employment, which is optional)

Pre-employment

Also required----

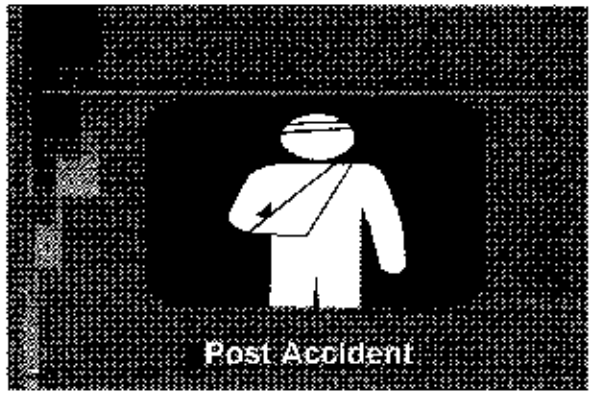
Employer must obtain testing information for the two previous years from all previous employers (applicant must give specific written authorization)

A driver with a positive must be evaluated by a Substance Abuse Professional (SAP)

Pre-employment (alcohol)

Not required if tested within 6 months (negative result)

No previous violations (checks with prior employers - 2 yr)



Post Accident

Post-accident

Involves the operation of a revenue service vehicle

Fatality (regardless of who is at fault)
Required medical attn. and/or any vehicle towed from scene (must test unless employer determines employee's behavior was not a contributing factor)

Time Frame (Post-accident)

Alcohol - within 2 hrs, or supervisor must document why not; after 8hrs discontinue attempt to test and document (a driver must remain available and not consume alcohol)

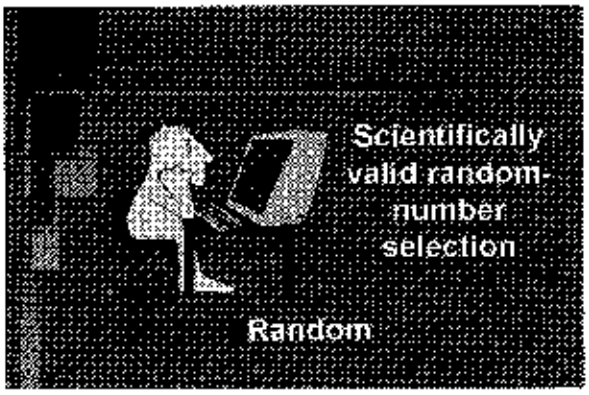
Drugs - within 32 hrs, or supervisor must document why not; after 32 hrs, discontinue attempt to test

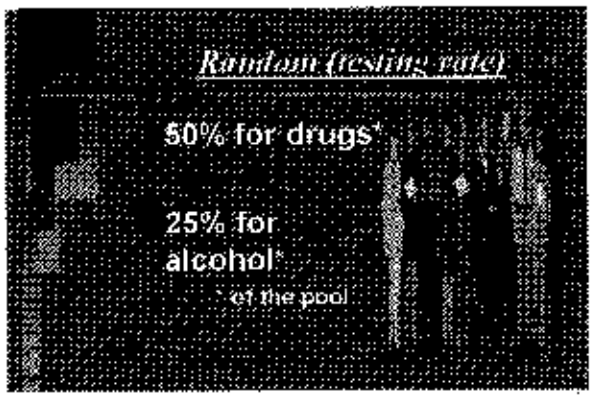
Law Enforcement & Post-accident testing

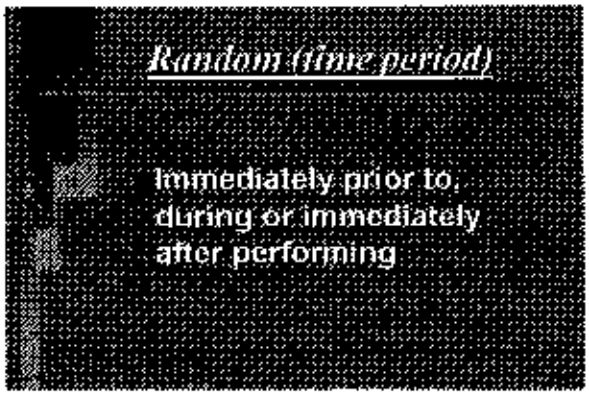
On site testing by police may substitute for alcohol test (either blood or breath)

Employer must obtain copy of test results

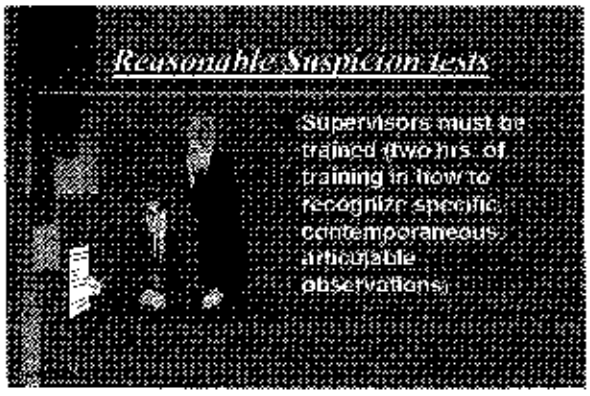
Random testing


Scientifically valid random-number selection
Random


Random (testing rate)
50% for drugs*
25% for alcohol*
of the pool

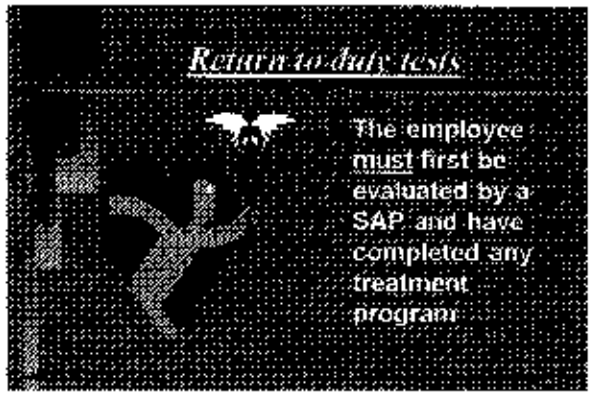

Random (time period)
Immediately prior to, during or immediately after performing

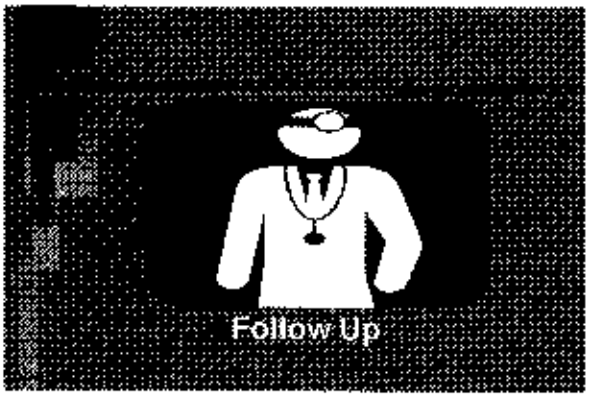

Reasonable Suspicion

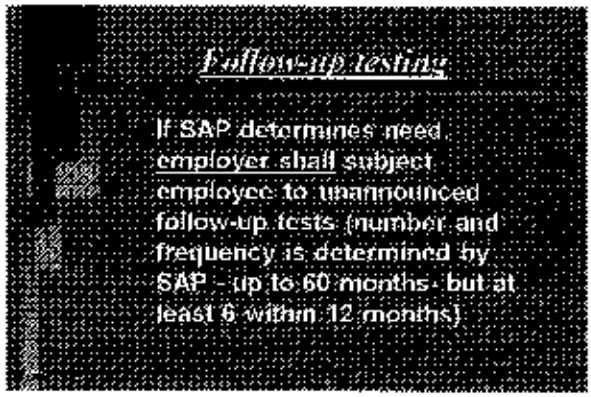

Reasonable Suspicion Tests
Supervisors must be trained (two hrs. of training in how to recognize specific, contemporaneous, articulable observations)


Reasonable Suspicion
DOCUMENT !!!
DOCUMENT !!!
DOCUMENT !!!


Return to Duty


Return to duty tests
The employee must first be evaluated by a SAP and have completed any treatment program


Follow Up


Follow-up testing
If SAP determines need, employer shall subject employee to unannounced follow-up tests (number and frequency is determined by SAP - up to 60 months - but at least 6 within 12 months)


For more information
FHWA
202-366-2981
FTA
202-366-2896

Concurrent Session #6
5. Financial Management Guidelines for Rural, Small Urban, Specialized Public Transit Providers

Charles Glover
North Carolina Department of Transportation

IMPLEMENTATION OF FINANCIAL MANAGEMENT GUIDELINES IN NORTH CAROLINA

Charles Glover
North Carolina Department of Transportation

Rural public transportation systems in North Carolina have benefitted greatly from the Financial Management Guidelines which were developed by MTAP States to provide a comprehensive set of procedures that address a wide range of financial management issues. Both Section 18 and Section 16 funded coordinated systems were provided training sponsored by the North Carolina Department of Transportation, Public Transportation Division, to enable the systems to understand and utilize the guidelines. Complete and accurate financial data allows transportation systems to: (1) manage the system so that its goals and objectives are met efficiently, (2) know the true cost of operating the system so that costs may be billed or allocated appropriately to the system's users; and (3) report to funding sources or purchasing agencies how funds were spent, revenues obtained and financial status of the organization. The fundamental requirement for the organization of the accounting system is a chart of financial accounts. The chart of accounts, prepared by the Transportation Accounting Consortium in 1986, provides a systematic way to record the information necessary to produce the income statement and balance sheet, and other records needed for reporting to various funding sources. The following sections of the guidelines have been most utilized and helpful to rural systems in North Carolina:

1. Service Planning

Rural systems must do service planning on a continuous basis. Service planning determines the operations, maintenance, administrative and capital requirements of the system which is necessary for competent financial planning and budgeting. Every four years, rural systems in North Carolina prepare a Transportation Development Plan (TDP). Service planning is essentially the "heart" of the TDP process and elements of the service plan are addressed daily by the system director. The seven key elements of the service plan are: service modes, service availability, organizational and institutional context, service pricing, personnel and labor requirements, rolling stock and other capital requirements.

2. Budgeting

A budget is a most necessary and useful planning tool. It forces management to plan for the future and to consider alternatives to enable the system to operate within the revenues available. Budgeting results in the organization having a better understanding of the overall organization and interrelations between functions. The other major benefit of budgeting is that it enhances the ability of management to control operations. Corrective actions can be taken where areas of the operations are not performing as expected.

Rural systems in North Carolina have found the budgeting section to be most helpful. The PTD is using the budgeting process to encourage local systems to develop fund balances. Each system should have revenue on hand equivalent to three months of the total administrative and operating expenses of the system. Systems are adding 2¢ - 3¢ to the cost per mile billing rate to provide local match for vehicle replacements. Local systems are beginning to use the budget as a control mechanism, knowing where they stand financially. Management is controlling the budget rather than the budget controlling them.

3. Financial and Performance Reporting

Both Section 18 and Section 16 supported systems in North Carolina provide extensive financial and performance reports to the PTD. These reports are utilized internally by the systems to determine if funds are being spent wisely and what changes need to be made to improve overall performance. Reports are provided to the system's advisory board who provide policy direction for the system. In North Carolina, the Rural and Small Urban Section staff of the PTD prepare a statewide operating statistics report which allows each system to compare themselves to their peers. PTD staff uses the report to evaluate the system's efficiency and effectiveness and determine the technical assistance necessary to help improve the system's operation. The guidelines have also assisted the local systems acquire a better understanding of the relationship between different performance standards.

4. Cost Allocation

Rural public transportation systems in North Carolina have been provided extensive training to understand the fully allocated cost concept. It is imperative that system directors identify and understand their costs to provide service. Only through the full allocation of costs can a director know the true cost of providing service and whether revenues are meeting the expenses of the service. The guidelines provide a cost allocation model that is very useful for distributing total system costs among funding sources and to individual routes or services. System directors are becoming aware of the true cost of providing service and adjusting their billing rate to ensure the receipt of adequate revenues.

Concurrent Session #6
6. Coordination of Public Transit and School Bus Providers

Sheldon Crum
CGA Consulting Services, Inc.

EXAMPLES OF COORDINATED PUBLIC AND SCHOOL PUPIL TRANSPORTATION

SHELDON CRUM
SENIOR ASSOCIATE
CGA CONSULTING SERVICES, INC.

EXAMPLES OF COORDINATED GENERAL PUBLIC AND SCHOOL PUPIL TRANSIT PROGRAMS

Altoona, Pennsylvania

- General public and school pupil transportation is operated by the Altoona Metro Transit (AMTRAN)
- Through contract arrangements, AMTRAN operates 15 school tripper routes for the Altoona Area School District and for parochial schools.
- This arrangement has been in place for 28 years.
- Only secondary and high school students are transported for the district but AMTRAN provides elementary transportation for parochial schools.
- Regular transit coaches are used for all pupil transportation.
- All tripper routes are open to the public.
- School district gives eligible students free transit passes.
- General public pays the fare.
- Driver training is provided upon hiring and a refresher course is provided prior to each school year.
- The school district provides safety training to students: the training is very tailored to those students who ride school buses and those who ride the city bus (e.g. students who use public transit are taught not to cross in front of the city bus).
- Discipline is handled by the schools and drivers do not put children off buses unless so instructed by the district.
- No special problems or serious accidents have ever occurred

Provider's Perspective

- "Runs very smoothly."
- "Tripper service also serves areas where regular routes do not go and thus provides transportation options for those areas."

School Representative's Perspective

- "Current arrangement is very satisfactory."
- "The training provided to drivers is very satisfactory."
- "The district has saved an estimated $800,000.
- "There have been no serious accidents or incidents."
- "Only receive about 6 parental complaints per year."

For more information contact References and Contact Persons 1 and 4.

Rome, Georgia

- General public and school pupil transportation is operated by the Rome Transit Department (RTD).
- RTD operates 15 tripper routes for the City of Rome.
- Students pay a fare which is 50 percent of the regular adult fare (30 cents per one-way trip).
- This arrangement has been in place for 28 years.
- RTD transports all elementary, secondary, and high school students.
- Uses regular transit coaches with seating capacity of 57 persons and vehicles are equipped with flashing yellow lights and signs.
- All tripper routes are open to all persons.
- Training is provided to drivers in the safe transportation of school children and elementary school pupils receive training in safety through the schools.
- Drivers report misbehaving children to school personnel who take the appropriate disciplinary action.
- There have never been any special problems or serious accidents.

Provider's Perspective

- "Cameras were recently installed on the buses to record all activities and this has helped reduce behavior problems."

School Representative's Perspective - Unable to contact.

For more information contact Reference and Contact Person 5.

Erie, Pennsylvania

- General public and school pupil transportation is operated by the Erie Metropolitan Transit Authority (EMTA)
- EMTA operates mainline and tripper services in the City of Erie and Erie County.
- Some students (elementary, persons transported for desegregation, low income, and disabled) are provided passes by the Erie School district and several rural school districts. High schools students and others pay either the $1.00 1-way fare or purchase bulk tickets for $0.70 per one-way trip.
- This arrangement has been in place for 20 years or longer.
- All tripper routes are open to the general public.
- Service is provided for elementary, secondary, and high school students.
- Regular transit vehicles (Neoplan, GMC, Orion, etc.) are used but vehicles do have special equipment including flashing school bus lights, arm, and stop sign.
- Signs on front and back of vehicles say "Students On Board" plus there is a warning that passing the bus is the same as passing a school bus.
- Buses are painted the Authority's color scheme.
- Comprehensive initial training includes transporting school children.
- For students sponsored by the schools, the school handles disciplinary problems. For those who pay the fare, EMTA will put off if behavior problems persist.
- There have never been any serious problems or accidents.

Provider's Perspective

- "This has been a good arrangement for the school district which saves considerable money."
- "The schools do not have to buy vehicles."
- " Vehicles are secured with federal, state, and local transit funds."
- "Several years ago and the EMTA's bid was far lower than a local private provider."
- "While tripper routes are open to the general public, who wants to ride with 50 noisy children?"

School Representatives Perspective - Unable to contact.

For more information contact References and contact persons 8.

Armstrong County, Pennsylvania

- General public and human service agency transportation is operated by the Mid-County Transit Authority.
- Beginning in 1974, and before the provider became a public operator, coordinated Head Start, Day Care, Sheltered Workshop, elderly, summer youth recreation, and general public service was being provided.
- Vehicles were shared but the provider only transported one user group at a time (*e.g.* Run #1- daycare in; Run #2 - sheltered workshop in; Run #3 - Head Start in; Run # 4, senior center in; Run #5 - senior center return, Run #6 - Head Start return; etc.)
- All vehicle costs including maintenance and capital were shared on a proportion of use basis. Replacement occurred more frequently but higher resale values were noted.
- All administrative and management costs were shared on a proportional basis.
- Driver costs were directly assigned to each agency served.
- Today the MCTA still provides general public, Head Start, Non-Emergency Medical, Senior Center, and summer youth transportation.

SunLine Transit Agency, Thousand Palms, California

- Created three tripper routes when the local school district filed for bankruptcy in 1991.
- The service ran for six months before management realized it was not working as expected.
- Currently SunLine Transit Agency is running only one tripper route.
- The provider's main concern is the "dumping" of school children into the public transit system and not being able to cope with the demand of new riders.
- It may eventually be a sound and efficient option for using an already established fixed route system for school children transportation.
- SunLine Transit is working with a consultant to study the problem and help design a route system that would help get children to school, as well as continue to serve the public.
- Public officials show a concern for the safety of the students riding the public transit system, although the California Transit Association stands behind its safety record.

- School buses in Douglas County are being federally subsidized.
- School buses in Douglas County transport adults to a site that combines K-12 public schools with adult job training.

Transfort, Fort Collins, Colorado

- Fort Collins High School is among Transfort's new bus stops.
- An existing route was modified so hourly service could be provided to the school.
- This is not a tripper-service, but rather a route designed to serve commercial and medical complexes as well as the Colorado State University.
- In 1994 fares for young persons were eliminated.
- Emphasis was placed on the need for educating children and youth about the use and benefits of public transportation.
- First year youth ridership increased 139 percent.

Metropolitan Transportation Authority of Nashville, Tennessee

- The Metropolitan Transportation Authority of Nashville has started a bus pool program this year to target individual commuter groups.
- The program targets students was well as the public.
- It provides an alternative for school pupils since the schools do not provide any transportation.
- Provides on-time and safe transportation for the pupils.
- Currently six bus pools are in operation, serving nine separate neighborhoods.
- The routes can be defined as a hybrid between local and express routes.
- The requirements for a student bus pool are a minimum of 48 riders and a fare of 75 cents which enables the MTA to break even.
- According to transit officials, the program works because of the parents involvement through their willingness to help design the routes and secure the required number of riders.
- This coordinated arrangement educates riders about public transit at a young age.
- Buses have no special features that identify the vehicles as carrying school children.

AN EXAMPLE OF AN INCENTIVE PROGRAM

State of Florida

- In the past additional money was provided to school districts that allowed school buses to transport people in addition to pupils.
- The incentive funds could be used for purchasing new buses.
- Some years ago in the Florida panhandle students from a junior college in Chipley operated district owned school buses which were open to non-students.
- Incentive funds are no longer available and the program is not as attractive as in the past.

EMERGING INNOVATIONS

Gwinnett County, Georgia

- General public demand response service is presently being planned by Gwinnett County Government.
- The county is looking at cost sharing arrangements to
  - coordinate maintenance;
  - purchase a scheduling software package; and
  - use deadhead school bus runs to transport the general public.

For more information contact References and Contact Person 7.

Addison County, Vermont

- Addison County Transit Resources has just completed a plan for implementing new public transportation in the county.
- The county wants to determine which private contract school bus operators are interested in becoming a public transit resource by making deadhead runs available and being reimbursed at the rate of $0.30 per passenger mile for all persons so transported.

For more information contact References and Contact Person 7.

Douglas County, Oregon - JOBLINKS Demonstration Project

- Douglas County is an isolated rural area beset by poverty, high unemployment and a lack of public transportation.
- Due to a decline in the logging industry , unemployment has risen as high as 50 % over the past three years.
- The JOBLINKS demonstration project includes a cooperative agreement between the Glendale/Azalea Skills Center and Glendale School District No. 77.
- This project was designed to demonstrate providing transportation to adults for work and for skills training using district school buses, carpools and volunteers.
- Adults can ride on Glendale School District buses (and special education vehicles) on a space available basis for work related trips or training at the Glendale/Azalea Skills Center.
- Due to state policy which prohibits pre-school children from riding on school buses with school age children, the coordinated effort was almost derailed. Many adults had small children who were to be provided day care at the skills center.
- It was determined that the pre-school age children requiring day care could ride on the Special Education buses because they transported young adults between the ages of 18 and 21 and not school age children.
- A benefit of the special education buses is that they operate year round, with the exception of holidays, and are seat belt and wheelchair lift equipped.
- The demonstration project began operating this past spring and through September over 700 trips were provided on district school buses.

For more information contact References and contact person 6.

EXAMPLES OF PRIVATE CONTRACTORS WHICH DO BOTH GENERAL PUBLIC AND SCHOOL PUPIL TRANSPORTATION

Irwin, Pennsylvania

- H. J. Gongaware Bus Company provides both general public and school pupil transportation using school buses for some combined general public and school pupil transportation.
- Maintenance, vehicle storage, management and other costs are shared.

Johnstown, Pennsylvania

- Lodestar Bus Lines, Inc. provides general public transportation using transit buses and also operates a fleet of school buses for pupil transportation.
- Maintenance, insurance, management, and other costs are shared.

Herkimer County, New York

- Birnie Bus Company operates school bus service in the Utica, NY area and also operates intercity general public transit services.
- During the summer the company provides transportation between Herkimer and Old Forge as a part of a summer youth employment program using school vehicles.
- Facility and other support costs are shared.

REFERENCES AND CONTACT PERSONS

1. Hagerty, Mr., Altoona School District - Altoona, Pennsylvania (814) 946-8220
2. *Metro* Magazine, Metro News - September/October 1995
3. *Passenger Transport* Magazine - Washington, D.C. Week of October 9, 1995
4. Quarry, F., AMTRAN - Altoona, Pennsylvania (814) 944-4074
5. Shealy, C., - Rome, Georgia (706) 236-4523
6. Spaulding, P., CALACT - Sacramento, California (916) 446-8018
7. Wallace, W. P. - CGA Consulting Services, Inc. - Columbia, South Carolina (803) 765-2833
8. Will, M., or Speice, B., - Erie, Pennsylvania (814) 459-4287

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